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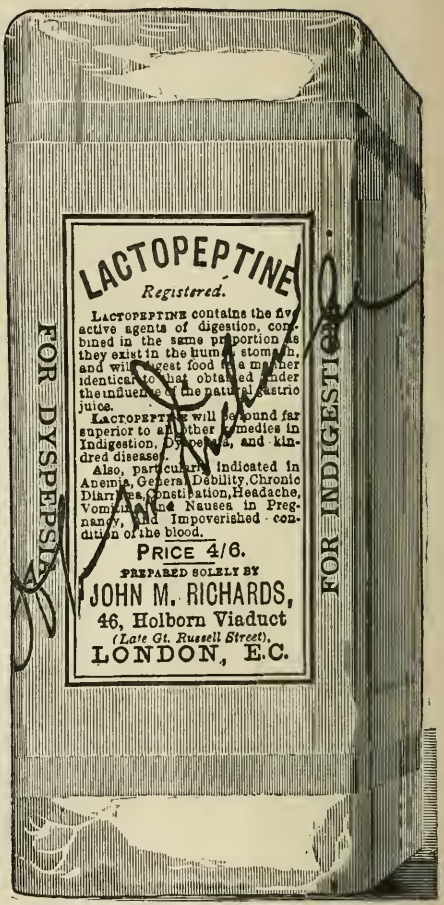
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2. Archives d'Ophtalmologie. Tome quatorzième. No. 12. Décembre, 1894. Paris: G. Steinheil. 1894.

3. Bulletin de l'Académie Royale de Médecine de Belgique. Quatrième Série. Tome VIII. No. 11. Année 1894. Bruxelles: F. Hayez. 1894. 8vo.

4. The Dental Cosmos. Vol. XXXVII. No. 1. January, 1895. Philadelphia: Patterson & White.

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6. The Therapist. Vol. IV. No. 9. 15th September, 1894. London.

7. Les Nouveaux Remèdes. 11e Année. No. 2 et No. 3. 1895. Paris: O. Doin.

8. Ueber die Wirkung des Salophens bei schmerzhaften Affectionen, Neuralgieen, Cephalalgieen, &c. Von Dr. De Buck und Dr. Vanderlinden. 1895. Reprint. Pp. 8.

9. St. Mary's Hospital Gazette. Vol. I. No. 1. January, 1895. London: H. K. Lewis.

10. Arthritisme, Migraines et Salophène. Par le Dr. A. Claus. 1894. Gand. Reprint. Pp. 7.

11. Festschrift zum fuenf und zwanzig jaehrigen Jubilaeum des Vereins Deutscher Aerzte zu San Francisco, Californien. 1869–1894. Pp. 45.

12. The Universal Medical Journal. Vol. III. New Series. Philadelphia: The F. A. Davis Co. January, 1895.

13. Catalogue général des Livres de Sciences. Librairie J. B. Baillière et Fils. Paris. 1895. 8vo. Pp. 112.

14. The Canadian Practitioner. Vol. XX. No. 1. January, 1895. Toronto: The Bryant Press.

15. La Presse Médicale. Paris: Georges Carré, 2, 9, 16 et 23 Février. 1895.

16. The Medical Magazine. Vol. IV. No. 2. February, 1895. London.

17. Diseases of the Eye. By Cecil Edward Shaw, M.A., M.D., M.Ch. London: J. & A. Churchill. 1895. 8vo. Pp. 106.

18. The Medical Pioneer. Vol. III. No. 5. February, 1895.

19. La Revue Médicale. Quatrième Année. No. 62 et No. 63. 1895. Paris.

20. Posological Tables. By William Craig, M.D. Ed., C.M. Ed. New Edition. Edinburgh: E. & S. Livingstone. 1895. Pp. 100.

21. The Atlantic Medical Weekly. Vol. III. No. 3. Saturday, January 19, 1895. New York.

22. Reminiscences of Dr. J. Marion Sims in Paris. By Edmond Souchon, M.D. New York: Trow Directory. 1894. Reprint. Pp. 15.

23. The Year Book of Treatment for 1895. London: Cassell & Co. 1895. 8vo. pp. Crown 8vo. Pp. 480.

24. Army Medical Department Report for the Year 1893. Vol. XXXV. London: Eyre & Spottiswoode. 1895. 8vo. Pp. 397.

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27. Notes on Movable Kidney and Nephrorrhaphy. By George M. Edebohls, A.M., M.D. Reprint. New York. 1895. Pp. 8.

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30. Gaillard's Medical Journal. February, 1895. New York. Vol. LX. No. 2.

31. On the Geographical Distribution of Tropical Diseases in Africa. By R. W. Felkin, M.D., F.R.S.E., F.R.G.S. Edinburgh: William F. Clay. 1895. Pp. 79.

32. A Practical Treatise on Diphtheria and its Successful Treatment. By Brownlow R. Martin, A.B., M.B. Univ. Dubl. Second Edition. London: Baillière, Tindall & Cox. 1895. Crown 8vo. Pp. 64.

33. Ontario Medical Journal. Vol. III. No. 6. Toronto. January, 1895.

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35. An Ephemeris of Materia Medica, Pharmacy, and Therapeutics. January, 1895. Vol. IV. No. 3. Brooklyn, N. Y. 1895.

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38. Colour Vision. By Captain W. de W. Abney, C.B., D.C.L., F.R.S., late Royal Engineers. London: Sampson Low, Marston & Co. 1895. 8vo. Pp. 231.

39. Annals of Gynæcology and Pædiatry. Vol VIII. No. 4. January, 1895. Boston, U.S.A.

40 Three Cases of Acute Pyelitis in Infancy. By L. Emmett Holt, M.D. Reprint. New York, 1894. Pp. 16.

41. The Nomenclature of Diseases of the Gastro-enteric Tract. The Report of the Committee of the American Pediatric Society, May, 1894. Reprint. Pp. 4.

42. Die therapeutische Anwendung des Ferropyrins. Von Dr. W. Cubasch in Standstad (Schweiz). Reprint. 1895. Pa. 4. (Duplicate copies.)

43. Bulletin of the Johns Hopkins Hospital. Vol. VI. No. 46. Baltimore. January, 1895.

44. The Lunacy Act and Orders. By J. M. Colles, LL.D., Barrister-at-Law, Registrar in Lunacy. Second Edition. Dublin: William M'Gee, 1895. 8vo. Pp. 234.

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OF

# MEDICAL SCIENCE.

## CONTENTS.

THIRD SERIES, No. CCLXXIX.—MARCH 1, 1895.

PART I.—ORIGINAL COMMUNICATIONS.

PAGE

ART. VIII.—On the Operative Treatment of Cancer of the Jaws, Tongue, and Lips. By SIR WILLIAM STOKES, Ch.M. Univ. Dubl., F.R.C.S.I.; 'Surgeon-in-Ordinary to Her Majesty the Queen in Ireland; Professor of Surgery, Royal College of Surgeons; late Hon. President of the International Medical Congresses at Berlin and Rome; Member of the German Surgical Society, Berlin; Past President of the Pathological Society and Royal College of Surgeons in Ireland; Examiner in Surgery, University of Oxford; Fellow, Royal Medico-Chirurgical Society, London, &c., &c. (Illustrated), - - - - - - - 193

ART. IX.—A New Method of Operating for the Cure of Superficial Varicose Veins. By W. THORNLEY STOKER, President of the Royal College of Surgeons in Ireland; Surgeon to the Richmond Hospital, and to Swift's Hospital; Surgical Fellow of the Royal University, - - - - - - - 209

ART. X.—On Adenoid Vegetations in the Naso-pharynx. By KENDAL FRANKS, M.D., F.R.C.S.I.; Surgeon to the Adelaide Hospital. (Illustrated), - - - - - - - 212

ART XI.—Small pox: its Diagnosis and Prognosis. By JOSEPH O'CARROLL, M.D., F.R.C.P.I.; Physician to the House of Industry Hospitals, and to the Children's Hospital, Dublin, - - 225

PART II.—REVIEWS AND BIBLIOGRAPHICAL NOTICES.

1. Manual of Diseases and Deformities of the Spine. By R. L. SWAN, F.R.C.S.; Surgeon to Dr. Steevens' Hospital, and to the Orthopædic Hospital, Dublin, - - - - - - - 233

2. A Practical Manual of Mental Medicine. By DR. E. RÉGIS. Second Edition. Authorised Translation by H. M. BANNISTER, A.M., M.D., - - - - - - - 236

PAGE

3. Recent Works on Urinary Analysis:—1. Practical Uranalysis and Diagnosis: a Manual for the Use of Physicians, Surgeons, and Students. By Charles W. Purdy, M.D.; Professor of Urology and Urinary Diagnosis in the Chicago Post-Graduate Medical School, &c. 2. The Urine in Health and Disease, and Urinary Analysis, Physiologically and Pathologically considered. By D. Campbell Black, M.D., L.R.C.S. Edin.; Professor of Physiology in Anderson's College Medical School, &c., - - - 243

4. The Dyspepsia of Phthisis: its Varieties and Treatment, including a Description of certain forms of Dyspepsia associated with the Strumous Diathesis. By W. Soltau Fenwick, M.D., B.S. Lond., M.R.C.P.; Assistant Physician to the Evelina Hospital for Sick Children, &c., - - - - - - - - 245

5. On the Principles and the Exact Conditions to be observed in the Artificial Feeding of Infants; the Properties of Artificial Foods, and the Diseases which arise from Faults of Diet in Early Life. By W. B. Cheadle, M.D. Cantab., F.R.C.P.; Physician to St. Mary's Hospital, &c., - - - - - - 247

6. Pulse-Gauging: a Clinical Study of Radial Measurement and Pulse-Pressure. By George Oliver, M.D. Lond., F.R.C.P.; Author of "Bed-side Urine Testing," &c., - - - 248

7. Helps in Sickness and to Health: Where to Go, and What to Do. By Henry C. Burdett, - - - - - - 249

8. Asthma and Chronic Bronchitis. By John C. Thorowgood, M.D., F.R.C.P.; Senior Physician to the City of London Hospital for Diseases of the Chest, &c., - - - - - 251

9. The Dental Cosmos, a Monthly Record of Dental Science, - - 252

10. Quain's Elements of Anatomy. Tenth Edition. Vol. III., Part III. Organs of the Senses. By Professor Schaefer, - - 252

11. On Chorea and Choreiform Affections. By William Osler, M.D., F.R.C.P.; Professor of Medicine, Johns Hopkins University, - 256

12. A Text-book of the Diseases of the Ear. By Dr. Josef Gruber, Professor of Otology in the University of Vienna. Translated from the Second German Edition, and edited with additions by Edward Law, M.D., C.M. Edin., M.R.C.S. Eng., and Coleman Jewell, M.B. Lond., M.R.C.S. Eng., - - - - - 258

13. Diseases of the Ear. By A. Marmaduke Sheild, M.B. Cantab., F.R.C.S. Eng., - - - - - - - 259

14. A Treatise on the Diseases of the Ear, including the Anatomy and Physiology of the Organ, together with the Treatment of the Affections of the Nose and Pharynx which conduce to Aural Disease. By T. Mark Howell, F.R.C.S. Edin., M.R.C.S. Eng., 260

15. A Short Sketch of the New York Medical College, with its Charter and a Complete List of its Officers and Graduates. By Edwin Hamilton Davis, A.M., M.D., - - - - - 261

PAGE

PART III.—MEDICAL MISCELLANY.

The Indian Medical Congress. By W. J. BUCHANAN, B.A., M.B., &c., Univ. Dubl.; Surgeon-Captain, Indian Medical Service; Surgeon, Presidency Hospital, Calcutta; late Travelling Prizeman, University of Dublin, - - - - - - - - 262

ROYAL ACADEMY OF MEDICINE IN IRELAND:—

SECTION OF OBSTETRICS.

Specimens Exhibited. By DR. W. J. SMYLY, - - - 269
A Specimen of Ruptured Uterus. By DR. W. J. SMYLY, - 269
Cæsarean Section. By DR. W. J. SMYLY, - - - 270
Specimens Exhibited. By DR. ALFRED SMITH, - - - 270
Specimens Exhibited. By DR. MORE MADDEN, - - - 273
An Encapsulated Tumour Removed from the Vaginal Wall. By DR. ATTHILL, - - - - - - - - 272
Amputation "in Utero." By DR. F. W. KIDD, - - - 274

SANITARY AND METEOROLOGICAL NOTES. Compiled by J. W. MOORE, B.A., M.D., Univ. Dubl.; F.R.C.P.I.; F.R.Met.Soc.; Diplomate in State Medicine and ex-Sch. of Trin. Coll. Dubl.:—

Vital Statistics for Four Weeks ending Saturday, January 26, 1895, 275
Meteorology—Abstract of Observations made at Dublin for the Month of January, 1895, - - - - - 281

PERISCOPE:—

Nail-biting, - - - - - - - 232
Treatment of the Insane, - - - - - - - 261
British Medical Service, - - - - - - - 268
Hypnotic Suggestion in Uncontrollable Vomiting, - - 268
Sunstroke in New York, - - - - - - - 286
Misuse of the Mails, - - - - - - - 286
Indian Medical Congress, - - - - - - - 287
Early Parturition, - - - - - - - 288

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OF THE

ROYAL ACADEMY OF MEDICINE

IN IRELAND.

VOL. XII.—1894.

*Edited by WILLIAM THOMSON, M.A., F.R.C.S.,*

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Surgeon to the Richmond Hospital, Dublin.

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EXCISION OF BOTH UPPER JAWS.
(No. 47.)

THE DUBLIN JOURNAL

OF

MEDICAL SCIENCE.

MARCH 1, 1895.

## PART I.

## ORIGINAL COMMUNICATIONS.

ART. VIII.—*On the Operative Treatment of Cancer of the Jaws, Tongue, and Lips.*[a] By SIR WILLIAM STOKES, Ch.M., Univ. Dubl., F.R.C.S.I.; Surgeon-in-Ordinary to Her Majesty the Queen in Ireland; Professor of Surgery, Royal College of Surgeons; late Hon. President of the International Medical Congresses at Berlin and Rome; Member of the German Surgical Society, Berlin; Past President of the Pathological Society and Royal College of Surgeons in Ireland; Examiner in Surgery, University of Oxford; Fellow of the Royal Medico-Chirurgical Society, London, &c., &c.

ALTHOUGH our knowledge of the ætiology and pathology of cancer—and in using that term I wish it to be understood that I employ it in a purely clinical sense and embracing malignant growths generally—is still involved in much uncertainty and doubt, modern pathological research has taught us that the unhappy consequences resulting from it are mainly the outcome of secondary or metastatic products. It has also shown that the malign influences of cancer travel along definite "infection paths," and that to the old and generally accepted view as to its heredity the Scottish verdict of "not proven" appears to apply. In truth, heredity has come to be regarded, as Mr. Herbert Snow has observed, as "an element much more likely to mislead in diagnosis

[a] Read before the Section of Surgery in the Royal Academy of Medicine in Ireland, on Friday, November 9, 1894.

than the reverse. In seventeen years' special experience I have learnt that a person who comes to me with a strong family history of cancer is much more likely to be suffering from some innocent ailment than from this dreaded scourge." The results of my inquiries in the cases I have operated on and tabulated here, as well as in others, are distinctly opposed to the old-established views as to the liability of the disease being transmitted from one generation to another. It is hard to understand why, if the disease is a hereditary one, some special forms of it should be so much more frequently observed in one sex than another. Mr. Barker and Mr. Morris practically reject the theory of heredity, the former observing that it would appear as though the occurrence of cancer in the families of those who have the disease in the tongue was little more than a coincidence.

The difficulties of coming to a definite conclusion at present on this point are very considerable, as the majority of the sufferers know, or profess to know, nothing of their own family histories, and also it must be remembered that there is a not altogether unnatural disposition on the part of a large number of patients to wilfully conceal the fact that their ancestors were afflicted with any form of cancer. Some years ago, when the late Sir William Gull, Dr. Mahomet, and others advocated, with characteristic enthusiasm, the method of research designated the "Collective Investigation of Disease," I was in great hopes that this important matter would be cleared up, but unfortunately my expectations were not realised, and the subject still remains shrouded in obscurity. Mr. Jessett, in his work on "Cancer of the Alimentary Tract," strongly favours the view as to the heredity of the disease, and to its being a constitutional not a local one; but even his exceptionally large experience in the Cancer Hospital, Brompton, seems hardly sufficient to justify any dogmatism on the subject.

I cannot but be of the opinion, too, that in the cases that apparently illustrate heredity, tubercular disease and syphilis probably act as important ætiological factors. There can be no doubt that cases of lingual ulceration depending on tuberculosis or syphilis have a tendency after a time to develop into carcinoma, and the accurate differentiation of these cases—especially in the transitional stages—presents, as has been so well pointed out by von Esmarch, problems for solution, than which none are more complex or more difficult in the whole range of surgery. The frequent

association of syphilis and cancer, and especially that of the tongue, is so often observed—and a typical example illustrative of this was recently under observation in the Meath Hospital—that it is impossible to avoid coming to the conclusion that the one largely exercises a predisposing influence in the production of the other. If this ultimately be established beyond all question—and increasing experience and research point in that direction—how greatly it adds to the heavy responsibilities incurred by persons who obstinately, wilfully, and wickedly persist in thwarting the efforts of those who endeavour to mitigate or stamp out what is essentially a preventable malady.

Much has been shown, too, by modern pathological research in favour of cancer being primarily a local affection and probably parasitic in its origin, for, although no carcinoma micro-organism is as yet *en evidence*, "the circumstantial and comparative evidence appears to be so complete," as Messrs. Ballance and Shattock have observed, that "we do not doubt that cancer is, in its essential pathology, a parasitic disease." The unquestioned connection between the results of certain sources of irritation and cancer, as seen so often in the lips, tongue, breast, and scrotum, point to the disease being primarily, at all events, a local one.

Though so much still remains to be ascertained, what has been accomplished is of the greatest possible value in a surgical point of view, proving, as it does, not only that the primary mischief, but also that the paths along which that mischief has spread, must be thoroughly and completely removed if an efficient check is to be put on its onward course. I allude, of course, to the lymphatics and glands in the proximity of the primary lesion. As there is no group of cancer cases that illustrate better the truth of this than those of the mouth cavity, among which I include the cases in which the lips, tongue, floor of the mouth, tonsils, and jaws are involved, I have deemed it not improbable that a short statement in reference to the principal cases of this kind that I have operated on might be of interest to the Surgical Section of the Academy.

I regret to say that the accompanying statistical record is by no means a complete one, or represents accurately the number of cases of cancer involving the mouth cavity that I have operated on in either the Richmond or the Meath Hospitals. This is due to two circumstances, the first and principal one being my own indolence in not having kept as accurate a record of my operative work as I should have done, and the other, that I had not the

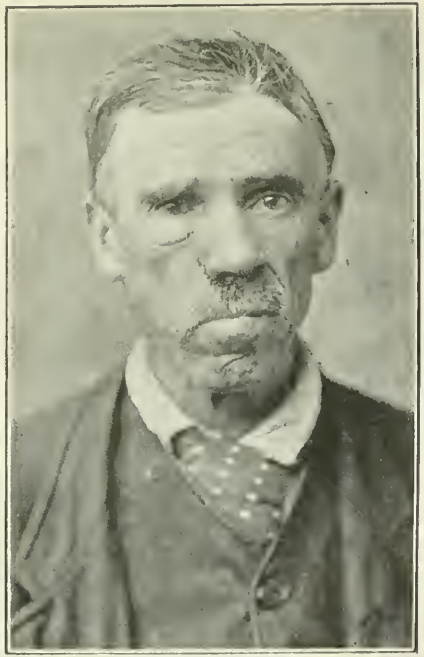
advantage in either hospital of a surgical registrar—an officer whose sole duty should be to make a record of every case admitted and treated in hospital.

However, on the tabular statement are indicated the cases of greatest gravity I have operated on, and which presented features of greatest clinical interest. The cases are 62 in number, consisting of 24 cases of excision of the tongue, 13 cases of excision of one upper jaw, 1 case of excision of both upper jaws, 8 cases of excision of the lower jaw, 3 cases of tumours of lower jaw, and 13 cases of extensive epithelioma involving the lower lip, chin, and floor of the mouth, necessitating complicated and difficult cheiloplastic operations. In the tabulation of these cases, which has been made in a very short time and with much unavoidable haste, I am greatly indebted for the kind assistance rendered to me by Dr. Harvey, of the Richmond, and Dr. William Taylor, of the Meath Hospitals.

Among other things these cases of cancer of the tongue illustrate two points of clinical interest—viz., the comparative rarity of the disease in the female, there being only 4 such in the 19 cases, and another was that the disease in almost all the cases was on the right side. This may, however, have been only a coincidence.

I do not suppose there is any topic in the whole range of surgery on which there is greater difference of opinion among surgeons than the one in reference to the operative treatment of cancer of the tongue. I allude here particularly to the questions in reference to how much or how little should be taken, and in what way it should be taken; whether the lingual artery should be tied, or laryngotomy, tracheotomy, or tamponade be employed as preliminary steps to the operation; what the indications or contra-indications are to the operation; the instruments to use, and the dressings to employ. Mr. Whitehead, for example, advocates the early and complete removal in all cases by a cutting operation done with a scissors; whereas Mr. Jonathan Hutchinson does not think it necessary to remove the entire organ, and prefers the écraseur. "Experience has proved," he observes, "that it is by no means necessary to remove the entire organ in cases where the disease is limited to one part. This is contrary to what might have been expected, as the tongue is vascular, succulent, and well supplied with lymphatics." With this statement I feel disposed to concur, as I have not witnessed recurrence of the disease in the portion of the tongue left when the disease was limited and had not

(No. 31.)



EXCISIONS OF THE UPPER JAW.

(No. 28.)

crossed the mesial line, but in the majority of cases observed it. Tracheotomy and tamponade, advocated so strongly as desirable preliminary operations by M'Gill, Barker, and others, were discarded by Volkmann, and the question of the merits or otherwise of previous ligation of the lingual artery is a perennial source of surgical contention.

I have had, through the courtesy of my friend, Mr. Croly, an opportunity of seeing two cases of cancer of the tongue operated on by him, in which he had performed a preliminary ligation of the lingual artery, and I am bound to say I was much impressed with the bloodlessness of the two excisions; but, notwithstanding this, I still am of opinion that, when the precautions I have mentioned are taken, in the great majority of cases this preliminary procedure is hardly necessary, and it certainly complicates the operation. My present feeling, therefore, would be only to adopt preliminary ligation of the lingual artery in exceptional cases—namely, where there is much thickening and infiltration, and where the entire organ has to be removed; and to the question of the desirability of preliminary bronchotomy and tamponade the same remarks would apply. But in the lymphatic glands, or "infection paths," as they have been termed, "infiltration of the adjacent tissues," Mr. Hutchinson observes, "is not common, but infection of distant glands may be produced by ulcers of the most insignificant size."

Under these circumstances, as in the great majority of these cases, relief from suffering and prolongation of life is, in the present state of our knowledge, the most that can be expected from operative interference; leaving a substantial portion of the unaffected part of the tongue largely promotes the comfort of the patient both as regards deglutition and articulation.

In reference to the way the excision should be performed, I may mention that in my earlier operations I relied almost exclusively on the écraseur, being impressed by the favourable statistics and bloodlessness of the procedure, and not sharing the views of those who think that the instrument should be regarded very much in the same light as one of those mediæval instruments of torture, such as are seen at Regensburg or Nuremburg. I have not altogether seen my way to discard my first love, but in order to get rid of what is to my mind the chief defect in the écraseur operation—namely, the great length of time that is required for the division of the tissues—I have combined the cutting with the

écraseur operation, and in that way have effected much economy of time. By cocaïn and other anæsthetics the operation can now be rendered as painless as it is bloodless. Having freely divided the sublingual tissues with scissors, in the way recommended by Sir James Paget, I usually insert the traction ligatures, one through the apex, and the other through the base of the tongue at a point well behind where the section of the tissues is to be made. To do this efficiently a buccal section, such as that recommended by Jaeger, Maisonneuve, and my former teacher and colleague, Maurice Collis, may be required, but this, I think, is only necessary in cases where the disease is extensive and the operation likely to be one of exceptional severity. Following Cloquet's suggestion, advocated by Morrant Baker, of splitting the tongue down the middle line with scissors to a point well beyond where the subsequent section of one or both lateral halves is to be made, I place round the base of one or other or both of these an écraseur chain. The tissues are then cautiously divided, but before complete division I have latterly transfixed the undivided portion containing the lingual artery with a blunt needle, armed with a strong silk, and after firmly ligaturing it, complete the division of the tissues with either écraseur, scissors, or knife. Careful removal of all enlarged neighbouring glands is, of course, essential. The initial and final steps are, as a rule, carried out by cutting with scissors, and the intermediate one by the écraseur, the advantages of which are thus retained while the disadvantages are got rid of.

In two cases of lingual cancer I have operated mainly by the cautery—in one by the galvanic cautery, as recommended originally by Middledorpf, and in the other by Paquelin's thermo-cautère. In both cases there was severe secondary hæmorrhage, and consequently I entertain not unnaturally a distinct prejudice against that method of removing a tongue.

As regards the after-treatment of the cases operated on for cancer of the tongue or jaws, I have little to say, except to urge the necessity of frequent irrigation of the mouth. One of the most potent agencies for mischief that formerly attended these operations—namely, pulmonary complications consequent on the absorption or inhalation of septic agencies emanating from the wound—may, I think, be said to be practically disarmed by the free and constant use of antiseptic irrigation. The one I usually employ is a strong boric solution, and in not one of these cases I have operated on has there been during convalescence evidence of

EXCISION OF THE UPPER JAW.
(No. 41.)

septic mischief. The case of the patient, both of whose upper jaws I almost entirely removed, died, no doubt, of bronchitis and pneumonia; but then it is by no means clear that these affections were connected with septic infection. The illness which proved fatal occurred a considerable time after the operation. The wounds had quite healed, and as he was in the habit of going out every day, I think it is just as likely that cold may have induced his illness as any septic agency.

In reference to operative details in excision of the upper jaw, I have little or nothing to add to what I have already published in various journals. The incision, as originally recommended by Sir William Fergusson, limited to the middle line of the upper lip and the groove between the ala nasi and the cheek, and carried upwards towards the inner angle of the eye, is, I think, insufficient to enable the operator to effect a complete excision of the bone; but when the neoplasm is limited in extent and confined to the anterior part of the alveolus and hard palate it may suffice. The usual modification, as all operators here are aware, is to carry the incision outwards along the lower border of the orbit to the middle line of the malar bone. I usually have made this latter incision, not horizontal but curved, with its convexity downwards, corresponding to the lower margin of the malar bone. This modification I have adopted solely for cosmetic purposes. The separation of the maxilla from its fellow I generally effect by powerful bone forceps, and the section of the malar bone on a line with the spheno-maxillary fissure with a fine resection saw. All the other necessary divisions of bone are effected by forceps. In the case where the double maxillary resection was performed, I did not, in dealing with the second maxilla, follow the recognised course of making fresh skin incisions, but dissecting off and reflecting backwards and outwards the nose and tissues covering the right maxilla, and dividing its attachment to the malar bone with forceps, made an infra-orbital section of the bone, and then removed it, leaving, however, the orbital plate.

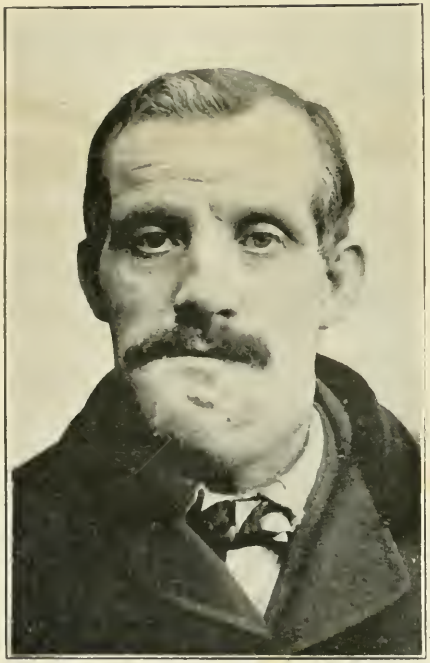
The steps taken after the operation consisted in careful drying and cleansing of the wound, and subsequently treating it with iodoform and boracic acid, To prevent the access of blood into the air passages, I have never performed a preliminary tracheotomy in any of these cases, nor have I adopted the very inconvenient method of keeping the patient's head hanging well back over the edge of the table during the operation, as

recommended by Professor Rose. To surgeons who are able to exercise their art confidently, quietly, with deliberation and care, and who do not think that rapidity and brilliancy are convertible terms, such devices appear to me to be uncalled for, and to add materially to the complications of an operation which, without them, are sufficiently great.

As regards excision of the lower jaw, partial or complete, I may repeat the opinion I have already on more than one occasion expressed as to the absence of any necessity for dividing the red border of the lip, the desirability of a free division of the soft parts previously to making any section of the bone, that this latter can best be effected by the use of the chain saw; also that arrest of hæmorrhage from division of the dental artery can be effected, not so well by the actual cautery as recommended by Mr. C. Heath, as by plugging the duct or foramen with a fine pointed piece of wood; that a traction ligature through the apex of the tongue is desirable in the event of there being any tendency to its falling back. In the cases, too, where there is a tendency to the remaining portions of the bone being drawn inwards, I have found that the application of that part of L'Estrange's apparatus for fractures of the lower jaw, for correcting the lateral overlapping displacement occasionally met with in that injury, is of much service.

For cosmetic purposes it is desirable, especially when the patient is a female, to make the external incision more below and behind than in front of the ramus of the jaw, and that the minimum of cicatricial deformity is obtained by the use of figure of eight sutures, the finest entomologist pins and soft floss silk being employed for the purpose.

In regard to the cases of labial cancer, a few of which are appended to this tabular statement of cases, I have again to express my regret that I did not keep a more accurate record of the number of them I have operated on. Most of the cheiloplastic operations that have been proposed I have tested, and with a fair measure of success. But labial cancer is one of the conditions, every example of which must be dealt with on its own merits; however, I desire to state that in my opinion, for cases of extensive cancerous diseases of the lips, Syme's operation, like everything else that emanated from that illustrious surgeon, possesses merits not found in any other of the many procedures that from time to time have been advocated.



EXCISION OF THE LOWER JAW.
(No. 48.)

Another source of regret is the limited number of cases I have been able to keep under observation for any length of time after operative interference, so that the facts connected with the ultimate results in the majority of the cases could not be ascertained, but still the outcome in a large proportion of cases that I have been able to follow is encouraging, and gives grounds for hoping and confidently expecting from the resources of operative surgery better results in the future, not merely in affording relief from pain, which is at times so extreme, and "the misery of one of the most distressing and disabling conditions," as Sir James Paget has so well described it, that man can be afflicted with, but also prolongation of life to some, and complete recovery to others.

In the future it is probable—indeed certain—that some more reliable weapons will be found for attacking cancer than the surgeon's scalpel or cautery. To bacteriological research we look with expectancy and confidence to furnish such weapons, and the search for, discovery and destruction of the still perfectly unknown carcinoma micro-organism will be, as von Billroth said, one "of the greatest tasks reserved for future generations!"

*Operations for Cancer of the Tongue.*

| No. | Sex | Age | Date | Nature of Case | Operation | Result | Remarks |
|---|---|---|---|---|---|---|---|
| 1 | Female | 30 | 4/2/80 | Cancer of left side of tongue | Removal by écraseur | Good | Buccal splitting required |
| 2 | Male | 25 | 21/4/80 | Epithelioma of tongue | Ligature of anterior and right side of tongue | Unknown | |
| 3 | Male | 60 | 1/12/80 | Cancer of tongue | Removal by écraseur | Good | Return of disease in submaxillary glands seven months later |
| 4 | Male | 56 | 27/3/82 | Cancer of tongue and floor of mouth | Removed by écraseur, also of glands at angle of jaw on each side | do. | Both linguals ligatured, and removal of piece of lower jaw |
| 5 | Male | 75 | 11/3/85 | Cancer of floor of mouth and tongue | Excision mainly by thermo-cautery | Relieved | Disease returned in eight months |
| 6 | Female | 55 | 29/4/85 | Cancer of tongue | Excision by two écraseurs | Good | Ligature of lingual |
| 7 | Male | 52 | 8/5/85 | Cancer of tongue | Excision | do. | do. |
| 8 | Male | 45 | 27/5/85 | Cancer of tongue, soft palate, and lower maxilla | Excision of half the tongue, lower maxilla, and part of soft palate | Relieved | Ultimate history unknown |
| 9 | Male | 75 | 30/11/85 | Cancer of tongue and floor of mouth | Excision | Death | See Case 5. |
| 10 | Male | 50 | 14/11/83 | Epithelioma of tongue, floor of mouth, and submaxillary glands | Excision of tongue with portion of lower jaw | do. | |
| 11 | Male | 44 | 27/3/82 | Epithelioma of tongue | Excision of tongue by Whiteheads' operation | Good | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 12 | Male | 50 | 11/7/83 | Epithelioma of tongue - | Excision of one lateral half | do. | |
| 13 | Male | 45 | 3/5/84 | Large, excavated, ragged ulcer, occupying right side of tongue | Excision of right lateral half with portion of lower jaw | Favourable | |
| 14 | Male | 74 | 6/11/88 | Epithelioma of tongue, right side | Tongue split and right lateral half removed | Good | |
| 15 | Male | 54 | 15/1/89 | Epithelioma of tongue extending to root of the tongue. Glands greatly enlarged in neck. Great pain | Removal by ecraseur - | do. | |
| 16 | Male | 45 | 2/1/71 | Epithelioma situated on right side of anterior third of the tongue, enlargement of submaxillary glands, infiltration, pain, and induration | Excision, with removal of sub-maxillary glands | do. | |
| 17 | Male | 48 | Feb., '71 | Ulceration (epithelial) above and to left side of tongue extending far back, also submaxillary glandular enlargements | Excision - - - | do. - | Patient seen one year and ten months after the operation. No evidence of recurrence |
| 18 | Male | 50 | Feb., '75 | Epithelial ulceration, left side of tongue with glandular enlargements | Excision - - - | do. - | Patient seen eighteen months after operation. No return |
| 19 | Male | 56 | Jan., '76 | Epithelioma on right side and extending to upper surface and across mesial line. There was but one gland perceptibly enlarged. Infiltration very great. | Excision, partly by scissors and partly by écraseur | do. - | Patient seen three months after operation. No return |

*Operations for Cancer of the Tongue*—continued.

| No. | Sex | Age | Date | Nature of Case | Operation | Result | Remarks |
|---|---|---|---|---|---|---|---|
| 20 | Female | 41 | 16/2/80 | Epithelial ulceration, extensive, spreading from left side of tongue to upper surface. Several enlarged glands | Excision | Good | Disease returned four months after operation. Chian turpentine tried with apparent temporary improvement |
| 21 | Male | 60 | Nov., '80 | Epithelial ulceration on upper and anterior portion of tongue, thickening, induration, pain, and profuse and constant fetid discharge from the mouth | Excision by écraseur | do. | Patient left two months after operation, "in every way pleased with the result." Subsequent history not obtained |
| 22 | Male | 50 | 20/7/91 | Ulceration of four months' standing, situated on right side. Oval in shape | Division of sub-lingual attachments. Division of tongue along mesial line, and removal of right lateral half by wire écraseur, and scissors | do. | |
| 23 | Female | 57 | 5/11/81 | Extensive epithelioma of tongue and palate | Removal by scissors and cautery | — | Patient died six months after |
| 24 | Male | 55 | 10/7/94 | Epithelioma of right lateral half of tongue and floor of mouth. | Removal by scissors and écraseur | Relieved | Rapid return of disease in right tonsil |

| No. | Sex | Age | Date | Nature of Case | Operation | Result | Remarks |
|---|---|---|---|---|---|---|---|
| 25 | Female | 29 | 21/2/80 | Tumour of inferior maxilla, sarcoma | Partial excision of lower jaw | Good | |
| 26 | Male | 31 | 30/7/80 | Epithelioma of lip and secondary cancer of jaw | Excision of lower jaw. Bone divided at each angle | do. | Ultimate result not ascertained |
| 27 | Male | 45 | 21/10/80 | Epithelioma. Disease involving lower lip and tissues covering chin | Partial excision of lower jaw | do. | |
| 28 | Male | 47 | 25/10/82 | Sarcoma, base of skull | Excision of upper jaw | do. | |
| 29 | Male | 17 | 6/3/82 | Sarcoma of upper jaw, following extraction of first upper right molar | Excision of tumour | do. | |
| 30 | Male | 13 | 26/11/83 | Fibro-sarcoma of superior maxilla | Excision of tumour with superior maxilla | do. | |
| 31 | Male | 50 | 28/2/68 | Epithelioma of upper jaw, occupying chiefly hard palate | Excision of upper jaw | do. | |
| 32 | J. G. | 18 | 22/9/79 | Recurrent epulis of upper jaw, operated on 12 months previously | Excision of tumour | do. | Copious secondary hæmorrhage |
| 33 | M. J. | 45 | 23/7/78 | Recurrent epulis of lower jaw | Excision | do. | |
| 34 | — | 40 | 18/9/78 | Epulis | do. | do. | |
| 35 | Female | 57 | 13/12/79 | Submaxillary sarcoma | do. | — | Patient died three months after his return to the country |
| 36 | Male | 20 | 25/2/80 | Cystic tumour of upper jaw | do. | Good | |
| 37 | Female | 24 | 1/3/80 | Sarcoma | Excision of lower jaw (partial) | do. | |
| 38 | Male | 45 | 14/6/80 | Epithelioma | do. do. | do. | |

*Operations for Cancer of the Jaws*—continued.

| No. | Sex | Age | Date | Nature of Case | Operation | Result | Remarks |
|---|---|---|---|---|---|---|---|
| 39 | Male | 65 | 28/11/81 | Epithelioma of lower lip; disease extending to tissues covering anterior part of lower jaw | Excision of lower lip and (partial) of lower jaw | Good | |
| 40 | Male | 30 | 30/10/82 | Sarcoma of upper jaw - | Excision of upper jaw - | — | |
| 41 | Female | 13 | 3/12/83 | Tumour (epithelioma) of upper jaw, probably originating in antrum. Rapid growth | do. do. - | Good | |
| 42 | Male | 60 | — | Epithelial ulceration of anterior part of alveolus on right side of upper jaw extending to muco-periosteum of hard palate | Partial excision of upper jaw | do. | |
| 43 | Male | 59 | 1/5/87 | Epithelioma of left superior maxilla | Excision of upper jaw - | do. | |
| 44 | Female | — | 30/1/93 | Malignant tumour of antrum (epithelioma?) | do. do. - | do. - | Left hospital April 21st well. Not heard of since |
| 45 | Female | — | 20/3/93 | Malignant tumour of five months growth; about size of a large egg; extending into mouth as well as externally | do. do. - | do. - | Left hospital April 28th |
| 46 | Female | 52 | 12/9/93 | Malignant disease of superior maxilla | do. do. - | do. - | Patient left hospital 14th November |
| 47 | Male | 54 | 14/9/91 | Sarcomatous tumour, involving both superior maxillæ | Excision of the left upper jaw, and right upper jaw, but leaving orbital plate of latter | — | Patient recovered from the operation, but a month afterwards contracted pneumonia, of which he died |
| 48 | Male | 45 | 22/1/94 | Sarcoma - - - - - | Excision of lower jaw | — | Recurrence of disease in six months |
| 49 | Male | 49 | 6/1/95 | Epithelioma of tongue, floor of mouth, and lower | Excision of lower jaw (partial), floor of mouth and base of tongue | — | Too soon (March 1) to judge of result |

| No. | Sex | Age | Date | Nature of Case | Operation | Result | Remarks |
|---|---|---|---|---|---|---|---|
| 50 | Male | 56 | 15/12/79 | Epithelioma of lower lip, floor of mouth and sub-maxillary glands | Excision and Symes' cheiloplastic operation | Good | |
| 51 | Male | 46 | 20/1/82 | Epithelioma - - - | Symes' cheiloplastic operation | do. | |
| 52 | Male | 40 | 4/2/80 | Epithelioma of lower lip - | Excision - - - | do. | |
| 53 | Male | 72 | 1/10/80 | Extensive epithelioma of lower lip | Zeis' operation - - | do. | |
| 54 | Male | 56 | 4/2/81 | Epithelioma of lip, and secondary enlargement of cervical glands | Excision - - - | — | |
| 55 | Female | 50 | 28/7/81 | Epithelial ulceration of lip and involving cheek. Rapid growth | do. - - - | Relieved | |
| 56 | Male | 40 | 20/1/82 | Recurrent epithelioma of lower lip | do. - - - | Good - | Operation performed eight months previously in the country |
| 57 | Male | 74 | 1/3/82 | do. do. | do. - - - | do. - | Previous operation six years ago |

*Operations for Cancer of the Lip*—continued.

| No. | Sex | Age | Date | Nature of Case | Operation | Result | Remarks |
|---|---|---|---|---|---|---|---|
| 58 | Male | 55 | 19/9/83 | Recurrent epithelioma of lower lip | Excision | Good | Former operation ten years previously |
| 59 | Male | 65 | 16/10/85 | Epithelioma of lip | do. | do. | Patient's father died of cancer of lower lip |
| 60 | Male | — | 5/7/88 | do. | do. | do. | |
| 61 | Male | 55 | 29/9/93 | Extensive epithelioma of lip and involving angle of mouth | Modification of Zeis' operation | do. | |
| 62 | Male | 68 | 17/10/94 | Recurrent epithelioma of lip | Excision and plastic operation | do. | This was the fourth time the patient was operated on. The first time was in 1874, in the Richmond Hospital; the second time, in 1884, in the same hospital; the third time, in 1892, in the Meath Hospital; and the fourth time in 1894. |

ART. IX.—*A New Method of Operating for the Cure of Superficial Varicose Veins.* By W. THORNLEY STOKER, President of the Royal College of Surgeons in Ireland; Surgeon to the Richmond Hospital, and to Swift's Hospital; Surgical Fellow of the Royal University.

THE ancient prejudice which existed against the application of ligatures to veins, and which, in my own practice, I had set aside during the early wave of surgical confidence due to the introduction of antiseptic methods, has returned upon me of late years. As a result of clinical observation, I have become convinced that ligature of veins is a proceeding attended by certain risks, and, if it can be shown that such ligature, independent of any danger which may follow it, is quite unnecessary, it may be conceded that no argument need be used for the retention of the practice. I do not wish to advance the proposition that, because danger may attend it, a ligature is never to be applied to a vein. But in operations for the cure of varices, so common in the superficial vessels of the lower extremities, I advocate the total abolition of the use of the ligature on the grounds that it is an added danger, and is in any case useless. In my own practice for the past seven years I have lost three patients from septicæmia, and two of these have been the subjects of apparently trivial operations of election for the cure of varicose veins in the lower extremities. Apart, however, from these fatalities, which took place in cases in which every antiseptic precaution had been observed, I have had other reasons for forming my opinion. I have observed that when varices were treated by division and deligation, with suture of the skin, which was my former practice, the proportion of cases in which troublesome inflammation and slow healing resulted was large. Also, I have found that when erysipelas was rife it was prone to attack patients whose veins had been deligated, whereas I have not had a single case of the disease among the numerous operations I have performed for the cure of varix by the open method without the ligature or suture, which I am about to record. This observation is of more value in that erysipelas has been common in Dublin for the last two years in all quarters of the city, and that this experience has covered most of that period, and been synchronous with it. My observation of the unfavourable nature of

operations where ligature and suture have been employed has been the same, no matter what form of ligature was used, or what method of antisepsis was favoured.

A very large number of men now present themselves, both in hospital and private practice, for operation for the relief of varicose veins. They are almost invariably young, or in the active period of life, and seek to qualify themselves, by the removal of a disability, for employment in the public services. The operations are entirely of two varieties—one for the cure of varicose veins in the legs, the other for varicocele. The method I propose is usually inapplicable to the latter. The parts are too lax and unresisting, and enough moderate equable pressure cannot be applied to prevent hæmorrhage, except in those cases where the operation can be performed high up, close to the external abdominal ring, and where the tissues of the groin afford good counter-pressure to a compress and well-applied spica. For the former, and more common class of cases, the operation is universally applicable, and has shown no flaw or failure during the year and a half I have practised it.

The method is as follows:—

*Preparation.*—The patient is kept in bed for two or three days to allow the veins to contract, his bowels are well cleared out, and the skin of the parts to be operated on is rendered aseptic. This is effected by—

*a.* Thoroughly scrubbing with soap and water.

*b.* Washing with ether.

*c.* Keeping for twenty-four hours in a dressing of 1 in 40 solution of carbolic acid covered with mackintosh, and changed two or three times.

*Operation.*—No anæsthetic is employed unless the patient insists on it. The pain is insignificant, and the probable struggling under ether or chloroform interferes with the niceties of the method, causes bleeding at the time, and if subsequent vomiting takes place may produce a blood-clot under the dressings. If anæsthesia is desired, it is better that it should be general, as freezing is inapplicable, and cocaïn introduced subcutaneously is likely to interfere with a rapid process of healing. No Esmarch's bandage should be applied; it empties the veins and renders them difficult to find, and its use is likely to be followed by bleeding, not only because it predisposes to intermediary hæmorrhage, but also because small vessels are

divided which may be avoided when they contain blood and can be seen. One of the points tending to success is the bloodlessness of the operation. The skin incision causes no hæmorrhage that pressure of a sponge does not soon stop. The position of the veins should not be indicated by the use of a pencil or dermatograph, as it may render the wound septic. If any doubt be felt as to finding the vessel easily, the best plan is to make the patient stand up so as to congest the veins, and slightly scratch over them at the points of operation with a sharp knife. At each place where it may be thought necessary to divide the veins an incision about half an inch long should be made in the vertical axis of the limb, the superficial fascia divided with an oculist's scissors, the vessel lifted from its bed, a quarter of an inch cut from its length, and gentle pressure applied with a sponge. When this procedure has been repeated at all necessary points, the part should be thoroughly irrigated with warm sublimate solution, flat compresses of sterilised gauze applied to each incision, a dressing placed over them, and the limb bandaged from the toes to above the seat of operation.

The patient should be kept in bed and not allowed to rise from the horizontal position for a week. If the dressings are then removed, a superficial linear ulcer will be found at the seat of each incision; these can be treated by wet dressings for a few days, when they will be found to have healed.

The principle of division of veins without ligature is not new, but it was applied to subcutaneous operations which would scarcely bear the light of modern surgery. The essence of the method under discussion is that while a ligature is not employed, the wound is treated as an open one and no sutures introduced into the skin. The advantage of these is that the danger of infecting the vein is lessened, the possibility of a clot of blood forming subcutaneously, with its attending risks and inconveniences, is avoided, and a rapid as well as a safe recovery is provided for.

Although the operation for varix is in some ways a trivial one, yet it is of such importance, in view of its frequency and possible danger, that I may be excused for dwelling on it, both in the matter of insisting on the application of established principles of cleanliness and care, as well as of considering any improvement in its method. I venture, therefore, to formulate the rules I have found good in my own practice, as follow:—

1. Due care in preparation, both by rest in the horizontal position for some days, and by suitable purgation.

2. Careful cleansing of the skin by such methods as may commend themselves to each surgeon.

3. Attention to the points I have indicated in the operation. It should be remembered that owing to the low tension of the blood in the veins, very slight pressure is required to control hæmorrhage from them, and that therefore thick compresses and tight bandages subsequent to operation are to be avoided; they are not required, and only serve to impede capillary circulation and delay repair.

4. Rest in the horizontal position for at least a week after operation, during which time the dressings should not be disturbed, unless pain, rise of temperature, or discharge indicates their removal.

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ART. X.—*On Adenoid Vegetations in the Naso-pharynx.*[a] By KENDAL FRANKS, M.D., F.R.C.S.I.; Surgeon to the Adelaide Hospital.

I VENTURE to bring before you a subject which, to a great extent, has been the monopoly of throat specialists, and which has excited much interest among them ever since Meyer, of Copenhagen, demonstrated the existence of adenoid vegetations in the naso-pharynx in 1860.

The subject is one of great interest and importance on account of the comparative frequency of the condition, the numerous evil effects which such growths occasion, the facility, as a rule, of recognising their existence, and the beneficial results, both immediate and remote, which follow their removal.

As this is the first occasion upon which the Academy has been invited to consider the question, I shall, with your permission, shortly recapitulate its history. Every practitioner has repeatedly had presented to his notice cases of children, or young adults, who have suffered from continuous colds in the head. He observes that there is an abundant muco-purulent discharge, especially in children, oozing from the nostrils, or trickling down the back of the throat. The voice is singularly deficient in resonance, the

[a] Read before the Section of Surgery in the Royal Academy of Medicine in Ireland, on Friday, December 7, 1894. [For the discussion on this Paper, see page 169.]

nasal consonants cannot be pronounced, and speech sounds dead. The mouth is kept permanently open, the breathing is entirely, or almost entirely, oral, and he is told by the parents that the child snores in his sleep, is restless, and very frequently has a running from the ear. If the child have a pair of large tonsils, all these symptoms were laid at their door, and their removal, when the child was old enough, was strongly recommended. Or if the practitioner happened to be one of those who have some ingrained prejudice against the removal of tonsils, the parents were told that when the child, in process of time, attained the age of thirty, or thereabouts, the tonsils would gradually subside, and the cause of all the trouble would thus be remedied by nature. If, however, the tonsils were found to be normal in size, the diagnosis then was that the child was the subject of a strumous diathesis, cod-liver oil and country air were prescribed, or, if it happened to be country-bred, it was sent to the seaside. This routine was supplemented by nasal douches, the insufflation of powders, and syringing of the ears.

In former days, while "adenoid vegetations" were still an unknown quantity, the removal of enlarged tonsils, when advocated and performed, was frequently followed by most unsatisfactory results. The snoring was perhaps mitigated, but the coryza, the oral breathing, and the ear complications, remained unrelieved. The more enterprising sought for better results by arguing that as the tonsils as a cause had been eliminated, the cause must lie in the nasal cavities, when they observed that the mucous membrane was frequently hypertrophied, and consequently scarification and cauterisation of the mucous membrane in the nasal passages, especially over the turbinated bones, was freely indulged in. Disappointment was again the reward of these attempts. It was just such a case which led Meyer to discover the *fons et origo mali*. "An instance of this kind," he says,[a] "led me to discover the true seat of the complaint. I had cleared the obstructed passage through the nose, removed the enlarged tonsils and the swelling of the throat and soft palate, but the manner of speaking remained as deficient as ever. The patient, a young lady, now underwent a regular course of training in pronunciation, but with no better result. She then came to me again. Having found rhinoscopy impracticable, I now passed my forefinger behind the soft palate, up into the so-called 'naso-pharyngeal cavity,' and was very much

[a] Med. Chirurg. Trans. Vol. XXXV. 1870. P. 193.

astonished to find this almost entirely filled up by *soft masses*, which, giving way to the finger, felt very much like a bunch of earthworms, and, hanging down from the roof of the pharynx, completely closed up the posterior nares."

Meyer succeeded in removing these growths with most satisfactory results; the voice became clear almost immediately, and the patient was able to breathe freely through the nose. When seen, eighteen months after the operation, there had been no return of her troubles.

Of the nature of these growths it is necessary to say a few words. In the pharynx and naso-pharynx, as you know, there exists normally a large quantity of adenoid tissue. The faucial tonsils are composed of it; small masses of it are found scattered over the posterior wall of the pharynx constituting the follicles; it is particularly abundant in the naso-pharynx. In the middle line on the posterior wall, at the top, where it curves over to form the vault, a large mass of adenoid tissue is conglomerated to such an extent as to have received the name of the pharyngeal tonsil, or Luschka's tonsil. On the lateral walls of the naso-pharynx there exists also a quantity of adenoid tissue, which can be easily recognised, when it is hypertrophied, as swollen bands extending downwards immediately behind the posterior pillars of the fauces.

Now in the two earlier decades of life this tissue is peculiarly liable to hypertrophy. This hypertrophy may be confined to one particular region, or we may find all these regions affected simultaneously with adenoid hyperplasia. Thus we frequently find the tonsils enlarged whilst the follicles in the pharynx and the adenoid tissue in the space above show no alteration from the normal. On the other hand, we sometimes find that while the tonsils appear quite normal the naso-pharynx may be completely blocked by these adenoid overgrowths. Sometimes we find the follicles on the back of the pharynx alone enlarged, but in my experience this is more frequently seen at a later period of life than when the other regions are affected. More frequently, however, we find in young subjects that the faucial tonsils, the pharyngeal follicles, and the adenoid tissue in the naso-pharynx suffer in common. Thus, if on inspection we find a child has large tonsils, and if we can see at the same time those red or greyish excrescences on the posterior pharyngeal wall, which we know are hypertrophied follicles, we may in general predicate that adenoid vegetations

exist in the vault above, and we shall seldom find ourselves mistaken.

The microscopical characters of these growths has fully established their nature, and has proved that they are composed of adenoid tissue, and are identical with the closed follicles of the mucous membrane from which they arise. That this is so can easily be seen by some sections which Prof. Scott has kindly made for me from growths which I recently removed from the naso-pharynx of a young lady who was suffering from the condition we are now discussing.

In the naso-pharynx itself we find considerable variety in the disposition of the hypertrophied adenoids. Sometimes the tissue on the side walls shows the greatest amount of enlargement; at other times the overgrowth seems to be chiefly confined to the pharyngeal tonsil itself. In many cases the whole vault and walls seem to be covered by masses of adenoid vegetations. The appearance in the rhinoscopic mirror resembles then a bunch of small grapes. When Luschka's tonsil is the chief seat of the disease, it usually protrudes from the roof and posterior wall of this space, in appearance somewhat resembling a cock's comb. Lastly, let me add that these growths may be quite soft, or they may be hard and tough. They bleed with the greatest facility, and to a certain extent are erectile, as observed by Meyer. From the fact that the presence of these growths induces and keeps up a chronic catarrh of the cavities in their neighbourhood, we find, as we might have inferred, a thickening and swelling of the mucous membrane in the nasal cavities, chiefly over the turbinated bones and over the posterior portion of the septum. The mucous membrane covering the soft palate, the pillars of the fauces, and the posterior pharyngeal wall present a similar morbid condition.

The symptoms produced by these adenoid vegetations, as Meyer first named them, depend upon their number and size, and still more upon their situation. If the growths are few in number and small, the symptoms may scarcely attract attention, or may be so reflected to other regions as to draw away the mind from the naso-pharyngeal space. Thus I have several times seen a persistent cough, for which no other cause could be found, disappear after the removal of some adenoid vegetations in the vault of the pharynx, or after cauterising some hypertrophied follicles on the posterior wall. Frequent headache has been observed in connection with these growths, occurring in about 27 per cent. of the

cases. Prof. Snellen and Dr. Guye, of Amsterdam,[a] have called attention to a form of chronic catarrh of the conjunctiva which refuses to yield to treatment until the coincident vegetations in the naso-pharynx have been removed.

When the growths are so exuberant, or are so situated on the posterior wall as to completely close up the air-passage through the nose, the symptoms become so marked and so characteristic that a diagnosis can be made, so to speak, in the street. It is sufficient to have once recognised a peculiar type of countenance familiar to us all as the facies of post-nasal adenoids, to recognise it again. These characteristic signs and symptoms depend on the fact that breathing through the nose is impossible, therefore oral breathing is a necessity; hence the mouth remains permanently open. Not only are the nasal sounds m, n, and ng impossible of production—as we hear also in cases of nasal polypi—but what helps to distinguish these two conditions is that when adenoid vegetations are abundant the *resonance* of the voice in the anterior and posterior nares is entirely lost, so that the speech sounds short, stuffed, or "dead." The nose by its long inactivity becomes pinched, and it is not unusual to find the nostrils markedly small and narrow. The open mouth with pouted lips, the expressionless face, and the lustreless eye, make up a characteristic picture suggestive of a dull and vacant mind. Indeed it has been frequently noted that children suffering from post-nasal adenoids are usually so dull and inattentive at their lessons that a new term has been coined, and the mental condition styled aprosexia (*a* and *πρόσεξις*—attention).

More important than any of these symptoms, however, are the ear troubles which accompany this disease, and are directly due to it. Ingals, of Chicago,[b] states that he has found the sense of hearing impaired in 33 per cent. of his cases. In mild cases or in the earlier stages a temporary deafness ensues whenever the patient catches cold, which in cases of adenoid vegetations occurs pretty frequently. After a time the intervals of good hearing become shorter, and deafness more persistent. Pain in the ear and tinnitus are frequently complained of; aural treatment, the use of Politzer's bag, or the Eustachian catheter gives relief for a time. If the presence of adenoids is unrecognised, or if they remain untreated, the condition of the ear becomes more and more

[a] Trans. Internat. Med. Congress. 1881. Vol. III. P. 290.

[b] Journal, Amer. Med. Assoc. Sept. 29, 1894.

aggravated, chronic otitis media becomes established, inflammatory changes take place in the delicate conducting apparatus of the middle ear, and the hearing is irretrievably damaged. Otorrhœa is very frequently observed in these cases.

These changes in the ear are rarely due to the mechanical obstruction of the trumpet-shaped openings of the Eustachian tubes at the back of the nose by means of these growths. We find ear troubles in cases where the growths do not directly impinge on these openings. They are due to the chronic catarrh which is an invariable consequence of these adenoid vegetations. The chronic inflammation and consequent swelling and thickening of the mucous membrane, already referred to as existing in the nasal cavities, spread into the Eustachian tubes, and by degrees diminish the lumen, or during exacerbations block them up altogether.

In the presence of adenoid vegetations in the naso-pharynx we have, I believe, the most prolific cause of that large class of cases which are indifferently grouped together under the head of "throat deafness," and I believe that when exploration of the naso-pharyngeal space becomes more general, and its treatment more thorough in early life, there will be fewer people to deplore that in the race of life they have been so heavily handicapped that they are practically disqualified for the competition.

The usual period for these growths to declare themselves is about the third year. One of the earliest symptoms is that the child sleeps restlessly; it keeps tossing about, and is frequently terrified by bad dreams. The child sleeps, indeed, but he does not rest. The ravelled sleeve is but poorly knit up, and consequently he looks unhealthy, and develops badly. All the ill effects of oral breathing become by degrees apparent. At night, as the mouth remains open, the saliva is not swallowed, but trickles out on the pillow. The constant muco-purulent discharge from the back of the nose trickles down to the throat, is swallowed, and gradually destroys the appetite. The mental dulness of the child, the waxen, sometimes greyish, aspect of the face, the general delicacy so frequently complained of by the parents, may all be referred to one consequence of these growths—the deficient supply of oxygen—the chronic carbonic acid poisoning of the system due to defective respiration.

Lowenberg[a] has called attention to a remarkable deformity of the chest walls which he has observed in many cases of very

[a] Les Tumeurs Adenoïdes du Pharynx-Nasal. Paris. 1879.

voluminous adenoid vegetations in young subjects. At the International Medical Congress in London in 1881, he thus describes it:—"The sternal ribs are depressed towards the lungs; their cartilages, on the contrary, bulging outwards, form a series of projections without, however, presenting the knotted, beady appearance of rachitis. The sternum, instead of projecting forwards, is remarkably depressed, especially towards the xiphoid cartilage, which is often sunk deeply inwards." He considers that this malformation occurs in early life, when the adenoid growths are beginning to impede respiration through the nose, and the child has not yet learned to breathe easily by the mouth. At this period at every inspiration sufficient air does not enter the lungs to satisfy the vacuum formed, hence the external atmospheric pressure is not sufficiently compensated by the internal pressure, and at this early period the yielding thorax succumbs to the increased strain.

Among children a host of remote symptoms, what may perhaps best be described as reflex symptoms—such as choreic movements, spasmodic croup, strabismus, &c.—have been found associated with post-nasal growths, and have disappeared when these growths have been cleared away. Moritz Schmidt lays special stress on the occurrence in many such cases of nocturnal enuresis, and advises us to bear this fact in mind in dealing with this distressing condition.

Among adults I have found reflex symptoms comparatively few. The most frequent is a distressing, hacking cough, sometimes in its paroxysms resembling whooping cough, generally without the satisfaction of expectoration. I have also observed violent sneezing, sometimes coming on at a particular hour each day, with all the usual signs of hay fever. But these cases are the exception. Adults generally seek advice on account of the discharge trickling down the throat from behind the nose, or the nasal obstruction, or still more frequently on account of defective hearing.

The ætiology of adenoid hypertrophy presents many difficulties. The causes which lead to vegetations in the naso-pharynx are similar to those which lead to hypertrophied tonsils. They are attributed to hereditary influences, and I have frequently observed that one or other of the parents who bring their children for treatment frequently presents the characteristic appearance and symptoms which indicate that the parent has, at an earlier period, suffered from the same malady. The exanthemata are responsible for a certain number of cases. Thus Dr. Ingals found that in 100 cases 3 per cent. appeared to form immediately after measles,

4 per cent. after scarlet fever, 1 per cent. after diphtheria, and 3 per cent. were attributed by the parents, or the patient, to pneumonia or influenza. In 63 per cent. nothing could be discovered which appeared in any way to account for the origin of the disease.

The diagnosis of adenoid vegetations can in general be easily made. In well marked cases the symptoms are so prominent that a diagnosis can be made on them alone. In others, especially where the symptoms are more of the remote or reflected kind, the diagnosis can only be completed by careful examination, which consists of two methods—inspection and exploration by the finger. These, when practicable, should be resorted to in all cases, either to originate or to complete the diagnosis. To inspect the post-nasal space, recourse must be had to the rhinoscope. In young children this is frequently impossible, but when practicable, as it generally is, it affords the most valuable information. We can then see these growths, if they exist; we can estimate their size and situation. The other method of examination has the advantage that it can be employed when the rhinoscopic mirror is useless. The method I employ is to stand behind and to the right side of a patient seated on a chair. The left arm encircles the head, and steadies it, while the left hand, if necessary, can hold something between the patient's teeth, if there be any danger of being bitten. Then the right forefinger, with the palmal surface upwards, is introduced into the mouth, and passed rapidly till the pharyngeal wall is reached, when, by crooking it upwards, it can with a little practice be insinuated into the naso-pharyngeal space without difficulty. The presence of adenoids is very easily recognised, and when once felt could never be mistaken. This examination will cause a little bleeding on account of the vascularity and extreme softness of these growths.

It is an unquestionable fact that as a patient approaches the age of 30 or 35 adenoid vegetations in the naso-pharynx, like the tonsils themselves, have a tendency to undergo a retrograde process and to atrophy. If we could be sure that in the meantime they would do no mischief of a more or less permanent kind, we might well leave them alone and trust to the unaided powers of the great *vis medicatrix Naturæ*. But this is just the very thing which we cannot be sure of—nay, we know very well that the evil effects of such growths outlive the growths themselves. The effect on the personal appearance, which is never lost when once

firmly established, is the least part of the harm done. Granular sore throat, as a consequence of these adenoids, forms a most remunerative disease for the throat specialist.

Among a host of other ill effects one stands prominently forward, not only as one of the most frequent, but as one of the most calamitous sequelæ of neglected post-nasal growths. That one is the damage done to the ears, and which forms the great bulk of cases of so-called "throat deafness."

The treatment of these adenoid vegetations resolves itself into two categories—the medical and the surgical. The medical treatment consists of the employment of medicated douches, or insufflations. Solutions, either douched or snuffed up through the nostrils, should be used at blood-heat. They should be approximately of the specific gravity of the blood, of anything a little denser. The most useful salts are—the chloride and bicarbonate of sodium, biborate of soda, or boric acid, the chlorate of potassium, and the chloride of ammonium. These may be combined together according to the view of the prescriber. I have also found Condy's ozonised sea-salt very useful; a small teaspoonful of the salt to a pint of water, at 100° F., makes a solution of the desired quality. This solution may be used with a Thudichum's siphon douche, or it may be sniffed up each nostril; the former is the preferable method. In very small or very recently hypertrophied adenoids this method may occasionally effect a cure; but as a rule it is only palliative, and the slightest provocation, such as a cold, will bring back the symptoms.

When more radical treatment is required—and that is the case in by far the larger number of cases—if the growths be small and sessile, and doing comparatively little mischief, they may be cauterised. The best caustic for this purpose is, I consider, chromic acid; but it requires very careful manipulation to apply it to the adenoids, and the adenoids alone. The galvano-cautery is sometimes advocated, but I have found its use in the naso-pharynx very cumbersome, because it should not be employed except with the assistance of the rhinoscope. A simpler and a better method, where very little requires to be done, is to pass the finger into the post-nasal space as already described, and if the nail be in good condition rapidly to scrape off any growths which may be felt. This is a good method when we are sure that the amount to be removed is so small that everything can be done without having

to introduce the finger a second time. The discomfort of the proceeding to the patient, and the amount of hæmorrhage which follows it, though of short duration, will in most cases prevent the patient from undergoing a second trial, and if all the growths have not been removed the ordeal for the patient will prove to have been useless.

In a very large number of cases a more radical treatment is required, and if it be undertaken the most important point to bear in mind is that *all the growths* must be effectually removed. When this is not done a relapse is almost sure to follow, with its accompanying disappointment. A relapse, when the operation is thorough, is in my experience of extreme rarity. I will shortly describe the method I adopt, but first I must say a word about anæsthesia. Several men have advocated the use of nitrous oxide in all cases of post-nasal growths requiring anæsthesia; this, I think, is a great mistake. Our object being to remove all the growths, I am convinced from experience that the time allowed by nitrous oxide gas is altogether too short. The only thing which can be said in favour of this gas, besides its safety in these cases, is that with it hæmorrhage is certainly less; but under chloroform I have always found that the freer bleeding can be easily controlled. The certainty which we can have that all the growths have been efficiently dealt with far outweighs any of the inconveniences which accompany or follow the administration of chloroform. But it is essential that the anæsthetic should be entrusted to an experienced administrator; I know of few operations which make a greater claim upon his coolness and skill. It has been advocated by Mr. Edmond Owen and by Mr. Parker that the patient should not be profoundly narcotised, that the laryngeal reflexes should not be abolished, and the reason given for this opinion is that any blood which may find its way into the larynx will be immediately expelled by coughing. I cannot coincide with these views. In Rose's position, which I always adopt, I cannot understand how blood can possibly get into the larynx if we only sponge carefully enough. On the other hand, nothing so impedes the operator or is so dangerous to the patient as reflex vomiting, and in my opinion it is more important to abolish this reflex than to preserve the laryngeal. Perhaps my views on this point have been largely influenced by having had, in nearly all my cases, the advantage of the assistance of such an accomplished anæsthetist as Mr. Piel. He always has kept up the requisite profundity

of narcosis without ever giving me any anxiety as to the safety of the patient.

The arrangements we make in one of these cases are as follow:—The patient is allowed no food for five hours at least previous to operation; the table is placed with its head in a good light. When the patient is anæsthetised he is drawn forwards, so that the head hangs well over the end of the table. A towel is bound firmly round the head, below the occiput behind, in front just above the brows. As the head hangs downwards, the blood, which usually pours out of the nostrils, runs down the forehead into the towel, and is thus prevented from matting the hair. In girls especially this is a very necessary precaution. A Fergusson's gag is now placed in the left side of the mouth, and is managed entirely by the anæsthetist. A well-trained and competent nurse must be close at hand with sponges ready, several small ones being secured on handles; a second nurse is desirable, as the time of one is fully occupied in cleaning the sponges. I have entered rather minutely into details, because it is all-important to have everything at hand and ready, as once the operation is begun there is no time to spare in looking for what may be required.

The operator sits or stands at the head of the table, with his back to the light. The general disposition of operator, anæsthetist and patient in Rose's position, is shown in the photograph. If the tonsils are enlarged, I remove them first. The instrument I now use is the ordinary Luer's guillotine, with the simple modification that the prongs have been removed. My reason for this is that if the tonsil be tough, instead of the barbed prong dragging the tonsil well into the loop of the guillotine, the reverse sometimes takes place, the prong is dragged through the loop by the tonsil, and when the blade is liberated, it slips over the prong and becomes jambed—an accident most aggravating when time is precious, and which requires some ingenuity to overcome. I prefer using this forceps as a substitute; the toothed end is passed through the loop of a guillotine first, and then the tonsil is seized. The loop of the guillotine now is passed down along the closed forceps until it encircles the tonsil. The forceps now draws the tonsil well out of its bed, and then the guillotine is worked slowly, so as to squeeze as much of the root of the tonsil as possible before dividing it. I generally prefer a blunt instrument. I cannot say I care much for Mackenzie's guillotine. It acts more by pushing the pillars of the fauces away from the tonsil, instead

From photo

F. Huth, Lith^r Edin^r

of drawing the tonsil out, with the result that a piece of the pillar very frequently slips into the ring, and is snipped off by the blade. This not only makes subsequent deglutition more painful, but a snipped pillar bleeds more than the entire cut surface of the tonsil. When both tonsils have been removed we need not delay to stop the bleeding, which may at first be brisk. As it collects in the hollow of the palate it can be easly sponged out. I then pass my finger up behind the palate, form a rapid estimate of the position and size of the growths, and then I pass up a Gottstein's curette, which is, I think, the most useful and the most manageable of the innumerable instruments which have been devised. With this instrument I scrape the vault, posterior, and lateral walls of the post-nasal space freely. Occasionally the finger is passed up to ascertain if all the growths have been removed. On a few occasions I have worked with a small curette passed through the nose, and with my finger-nail passed up behind the palate.

Some men endeavour to dispense with curettes and forceps, and to scrape away the growths with the finger-nail. A few small growths can be got rid of in this way; but I am quite satisfied that, in the majority of cases, the unaided finger-nail is not sufficient. I have very good nails, and I do not bite them, still I find they are not capable of doing what a curette can do thoroughly. The artificial finger-nail recommended by Sir William Dalby is a most awkward and unmanageable instrument, and with it the sense of touch is rendered useless. Whilst this process of scraping is going on, bleeding is generally profuse. It is very soon seen to pour out through the nostrils, downwards over the eyes to the forehead, and into the towel, or on to the mackintosh sheet which lies on the floor. As soon as the scraping is completed, I sponge out as much blood as I can, then a retractor is passed through the mouth, so as to draw the uvula and soft palate forwards, and then I proceed to rapidly plug the post-nasal space. The plugs I have already mentioned, covered with the tannic and gallic acid mixture, are passed along the retractor, and they glide of themselves into the naso-pharynx. With my fingers I press them up into position one after another until the whole space is filled. I find this an admirable plan for arresting the bleeding from the tonsils, as well as from the space above. The strings attached to the plugs are allowed to hang out of the mouth. I now wait for a few minutes, until I have reason to think that the bleeding has stopped, and

then I cautiously remove the plugs before the patient is allowed to come from under the anæsthetic. Should any bleeding reappear, a second plugging can be resorted to; but this is seldom necessary, a little oozing is of no consequence. The patient is then put back to bed, turned well over on his side, so as to allow any oozing to escape from the nose and mouth. I have only in one case been obliged to replug the post-nasal space some hours after the patient had recovered consciousness. I found no difficulty in carrying out the method described above.

The after-treatment is of the simplest. I see no advantage in carrying out an elaborate system of nasal douching for weeks afterwards as practised by Meyer and others. If things go on as they generally do, I leave the patient alone, and generally find that he is able to be up and about as usual within a week. For the first three days I keep him in bed, and for a couple of days longer in his room. By that time all soreness has gone, and deglutition has become quite easy.

The after-results are, in a very large number of cases, most satisfactory. The symptoms for which the operation is done disappear; the dull-eyed, vacant-looking boy, with open mouth and impaired hearing and defective speech, becomes, during the course of a year, bright and intelligent. His hearing, if taken in time, becomes keen and his speech good. He keeps his mouth shut if taught to do so, sleeps quietly at night without snoring, and improves in health. It has been estimated that a child who has been stunted by adenoid vegetations grows twice as much during the year succeeding their removal than he would under ordinary circumstances in the same period, and it has also been estimated that the weight sometimes increases in a year by 30 per cent.

Of course many cases do not show very startling results, but I think I am justified in saying that, taking the cases all round, there are few operations which can show so much after-good to the patients as the removal of adenoid vegetations from the naso-pharynx.

ART. XI.—*Small-pox: its Diagnosis and Prognosis.*[a] By JOSEPH O'CARROLL, M.D., F.R.C.P.I.; Physician to the House of Industry Hospitals, and to the Children's Hospital, Dublin.

IN the discussion of the subject of this paper I can hardly pretend to have much that is new to say. I can only hope that the statement of my own experience may have some merits due to its personal character, as we sometimes hear with pleasure, and remember with comparative ease, incidents of ordinary life or foreign travel when told by him to whom they happened, which would slip out of our memories if read in a book or newspaper.

I must say, at the start, that for practical purposes I draw no distinction between true unmodified variola and the disease as it occurs in persons who have been vaccinated. Either permits of recovery or death; both may present difficulties of diagnosis. My object, again, is not to give a differential diagnosis of small-pox at all its stages, but to supply some help in deciding at one visit whether we have to deal with a case of that disease or not. To delay too long in recognising a case as one of small-pox, or to send a non-variolous case into a small-pox ward, is equally a serious mistake.

Small-pox must be recognised from the history (opportunity of infection, mode and dates of onset), the symptoms, and the eruption. I may be pardoned for recalling the typical points in regard to these matters. On a certain day—the first day, or day of onset—the patient feels ill, has headache or backache, or general pains in the bones, and some rigors. Next day he is still sicker, vomits, or at least feels nausea. On the third day the eruption makes its appearance, or it may be delayed till the fourth. The temperature has risen on the first day possibly to 102° or 103°; on the second day possibly to 104°. It is usually stated that the temperature falls somewhat critically on the appearance of the rash. That is not exactly our experience, but rather that it takes a couple of days to fall; those days—namely, the third and fourth, or fourth and fifth—on which the rash is extending over the body. For the rash, papular in character, comes out first on the face, then on the wrists, then it appears on the legs, the trunk, and, last of all, on the palms and soles. By the time papules have appeared in these

[a] Read before the Section of Medicine in the Royal Academy of Medicine in Ireland, on Friday, January 11, 1895.

last the eruption on the face has become vesicular. During the fifth and sixth days the majority of the papules become vesicular, and in a considerable proportion of cases the vesicles become umbilicated, the temperature at the same time being almost normal, or at least subpyrexial, and the patient feeling almost quite well. From the seventh to about the twelfth day the vesicles become pustules, and these gradually burst or dry up into scabs, the temperature during those days forming a somewhat rounded curve, usually known as the secondary or suppurative fever. The patient is again ill, this time with asthenic symptoms, which gradually improve from the eleventh or twelfth day, till about the eighteenth or twentieth day he is quite well again.

I have described a typical case with favourable ending. I have to add that some cases have no secondary fever, and are practically out of all danger by the seventh or eighth day; while others die at all periods of the disease, from the third day to the third or fourth week, and as a result, for the most part, either of the initial virulence of the infection, or of the amount of the later suppurative process.

It is easy to see that a disease which has so many phases must present a great many resemblances to other morbid conditions, and that it is no wonder that mistakes in diagnosis should occasionally occur. The onset of variola is exceedingly like that of influenza, by reason of the rise in temperature, and the headache, backache, and general pains in the bones. Similarly it may resemble acute rheumatism, typhus, and cerebro-spinal fever. The headache may suggest enteric fever, but the onset is too sudden. Practically, it may be stated, small-pox is seldom diagnosticated with confidence till some eruption has occurred, but it is not always a simple matter even then. Certain initial or preliminary eruptions occur in about 10 to 15 per cent. of small-pox cases. These may be local or general, petechial or erythematous. The local ones affect mostly the groin region, or the groins and axillæ, and have usually a purpuric character; the general ones simulate scarlatina or measles. Assuming the presence of an epidemic, and the onset symptoms in a particular case suggesting the possibility of small-pox, the presence of one of these rashes might practically complete the diagnosis. But diagnosis would be difficult in a case such as occurred in the Hardwicke Hospital, where a man, covered with a scarlatinal rash, stated that his child had died of scarlatina a few days before, were it not that the variolous papules were appearing through the

general erythema. I think it may be said that the diagnosis of small-pox cannot be absolute till the specific papule has appeared. One exception, perhaps, may be made to this statement—namely, that in some cases of hæmorrhagic small-pox, marked by violent onset symptoms, and characterised usually by persistent backache, and in which, therefore, the diagnosis is pretty clear, death may occur before any papular rash manifests itself.

The diagnosis of the eruptive stage of small-pox is not always as easy as one would suppose. A hæmorrhagic case may be mistaken for one of severe purpura or scurvy, or *vice versâ*. Sometimes a common sweat-rash is mistaken for that of variola, or a very discrete, small pustular rash, confined to the face, may be mistaken for *acne sebacea*. Cases of variola, with what is called a corymbose eruption—that is, in which there occur, perhaps, two or three patches of thickly-clustered and rapidly-cohering vesicles—may simulate herpes zoster if the corymbose patches are much in advance of the remaining eruption. Strange to say, Fagge states that he never saw this form of eruption. It happened that I saw the very first case of the present epidemic in Dublin under the following circumstances:—On my lecture morning at the Whitworth Hospital, I was brought by my resident pupil to look at a case of supposed skin affection which had been admitted the night before. The man made little or no complaint, except of a cough which proved to be associated with tubercular disease in the apex of the left lung. He presented, on the inner surface of each thigh, a herpetic-looking patch about four inches by three in size, but on closer examination a few fine papules could be found here and there over the trunk and limbs. I had him at once removed to the Hardwicke observation wards as a probable case of small-pox, and when I saw him again a few hours later all doubt was removed from my mind by finding the general eruption much further developed.

Scabies may easily give rise to some diagnostic difficulty; so may impetigo; and so may syphilis, with either papular or pustular eruption, especially if of rapid deveplopment. During a small epidemic, treated in the Hardwicke in 1887–88, a woman was sent in as a case of small-pox in the pustular stage. She looked very like it, but she was by no means so sick as such a plentiful rash would have warranted, and further, a valuable diagnostic point, the eruption was in some places papulo-roseolar. She was recognised as a case of syphilis, and before she left the medical ward to

which she was transferred, she had developed a syphilitic lupus which eroded the alæ of her nose. But a serious difficulty may occur if a mild variola occur in a patient with secondary syphilitic eruption. This happened to one of our recent cases—a man who was sent into hospital only when the variolous eruption had, as it were, raced past the syphilitic one, coming out on the palms and soles, and developing the typical vesicles not merely on the skin but on the palate and throat.

Varicella or chicken-pox may resemble variola very closely, and during an epidemic of small-pox the diagnosis between the two diseases at one visit may be decidedly difficult. Characteristic cases of the two diseases are, no doubt, easily differentiated; but where either approaches the type of the other the difficulty is increased. To this audience I need not rehearse the many points of difference between these two diseases; the incubation, the onset, the eruption, the course, the sequelæ, usually help us to separate the diseases at once. But cases occur in which we have no such help, and taking these exceptional cases as my justification I venture to state, in the first place, that cases of small-pox may have little or no illness leading up to the eruption or afterwards; that the eruption may be very scanty; that it may not be noticed till it has already become vesicular; that the vesicles may, for the most part, dry up or burst before they undergo any umbilication; that there may be no fever, at least during the time the patient is under medical observation; and there may be no pitting of the skin afterwards. In the second place, that cases of varicella sometimes occur with somewhat severe onset symptoms—even with convulsions, as recorded by Fagge—with a general papulo-vesicular eruption, involving even the palate and fauces, in which presently some umbilication becomes perceptible, with, around the vesicles, a suspicious areola, which when the vesicle becomes purulent sets up a close resemblance to the small-pox pustule; the fever runs, perhaps, to 102° or more, and afterwards some pitting is left and the patient may suffer from more or less debility. On the one hand, then, cases of small-pox may possibly be passed as chicken-pox; on the other, cases of varicella are likely—especially during an epidemic of small-pox—to be sent into hospital as having variola. I need not say what evil consequences may flow from either mistake.

Now I cannot presume to lay down any rules by which such errors may be absolutely prevented. It is true that if we could

afford to watch the case for two or three days we could hardly fall into the error at all, but where small-pox is epidemic delay is surely dangerous. Picturing to myself a difficult case, I shall attempt to indicate the points on which to rely for a satisfactory judgment at a single visit.

If there be a history of two days' illness before eruption, it makes for small-pox; also if the eruption is better marked on the forehead and face than on the trunk, the reverse usually being the case in chicken-pox. If papules have distinctly been noticed in advance of vesicles, and if at any given region, such as the face or the trunk, the rash is pretty uniform, that is, either papular or vesicular and not mixed; if the development of the rash has been from the face downwards, the legs coming last; and finally, and as I believe an essential point, if the papules can be seen or felt on the palms of the hands and soles of the feet. On this I should lay great stress; I do not think I have seen a single case of small-pox without at least a spot or two among those four surfaces, and I do not remember ever to have seen a varicella vesicle on them. If it does occur, it must be very rarely indeed. Further, it is well to remember that, in persons bearing good infancy vaccination marks, small-pox is rare before ten years of age. Lastly, should doubt still remain we should vaccinate, and take care to vaccinate effectively, both for the sake of the diagnosis and for prophylaxis.

The prognosis in small-pox has to deal with death or recovery; and if recovery is probable, as to possible permanent ill consequences. My experience of evil sequelæ from small-pox is practically none, unless we include pitting among them. With regard to pitting, I am quite of Osler's opinion that its prevention "is really not in the hands of the physician. It depends entirely upon the depth to which the individual pustules reach." If the pustule destroys a portion of the cutis vera there must be a pit or a scar; therefore, whenever and wherever the eruption is scanty and superficial, and the epidermis thin, there is less likelihood of pitting than under the converse circumstances.

As regards life, I think it may be said that prognosis in small-pox should be very guarded till convalescence is well established. The mildest cases cannot be said to be quite free from danger till the eighth or tenth day, but there are certain cases in which death may be said to be as probable as survival; some in which death is almost certain. The gravity of a case is of course greatly

enhanced by the fact that the patient has not been vaccinated, and in infants and children the danger is vastly magnified. On the other hand, well-vaccinated children, if they take the disease, probably get over it easily.

The earlier the eruption appears after the onset the greater is the danger of its becoming confluent and severe. We have had some striking examples of this statement, though on the other hand some of our cases had distinctly early, and at the same time scanty eruptions. The question of confluence has more bearing upon prognosis. The term *confluent* is, it seems to me, too frequently referred to the pustular stage; but in the pustular stage there are several more valuable criteria of prognosis than the mere configuration of the eruption, and besides, more or less confluence is very common indeed in the pustular stage. In so far as confluence of the eruption is of value as an indication of future severity, it may be guessed at and measured in the vesicular period—that is, about the fifth or sixth day. The more confluent the rash is or promises to be upon the face, the greater the probability of a severe secondary fever and the greater the risk of an unfavourable ending. But confluence, *per se*, has no mysterious significance; it is a measure of the thickness with which the eruption is developed, and to some extent of the depth of true skin involved. The more plentiful and the deeper the eruption the more danger. To a particular form of confluent rash the term corymbose has been applied; I have defined it when discussing diagnosis as resembling a very close-set herpetic patch. Marson, as quoted by Fagge, found the mortality of patients affected with this form to be 41 per cent. We have had several examples of corymbose rash, and we have not learned to associate them with any special danger, unless when occurring on the face.

The gravity of hæmorrhagic small-pox needs no telling here. But it may be well to define as far as possible the elements which constitute a hæmorrhagic attack. In the first place let us put the absolutely hopeless cases, in which there is bleeding from the urinary tract, or from the alimentary canal. Some of these cases may have at first only bloody sordes on the lips or teeth; but by-and-bye there is distinct bleeding from the gums or the nose, or from the bladder, vagina, or anus. In such cases the rash may hardly have appeared; when it does, it is papulo-purpuric. It seldom has time to become vesicular; death always occurs before pustulation. A still severer hæmorrhagic case may simply look

bluish or extremely cyanotic over the whole surface, with here and there still deeper purpuric patches, and may die without any sign of internal hæmorrhages before any but the most rudimentary papules can be discerned.

But there are cases less striking than these in which the prognosis is only a shade better. They are those in which the eruption has time to appear, but appears in a hæmorrhagic form. Either the papules are at their eruption surrounded by a petechial areola, or when they become vesicular the vesicle fills with blood, not serum. A few sanguineous vesicles on the legs are not of evil import, but the higher the vesicular hæmorrhages reach the greater the danger, and if the face and arms have petechial papules or sanguineous vesicles the outlook is, as a rule, most gloomy.

Next to the hæmorrhagic eruption we may take the plentiful but slow and ill-developing rash as an omen of danger. The papular rash, which is plentiful, and has deeply stained areolæ, and becomes vesicular very slowly, and in which the vesicles do not come to the normal size or prominence, but remain small and flat, is decidedly a dangerous eruption.

Having said so much for the special characters of the variolous attack as they are of value for prognosis, I may now note some other circumstances which predispose to an unfavourable ending. In a highly septic infection such as this considerable strain must be thrown upon the kidneys. As might be expected, a large number of our cases have had symptomatic albuminuria; but cases of antecedent renal disease have a poor chance of recovery. Two of our cases died in uræmic convulsions at the same time that the rash was of the very scantiest, and almost at its outset.

Previous intemperance is also a potent factor for ill in small-pox, a fact of which we have had examples. Lastly, pregnancy is said to produce abortion, which in most cases ends fatally. We have had no case of abortion, but we have had some cases in which a normal parturition appears to have been determined by the onset of variola. In each case the mother has survived, and the infant, notwithstanding vaccination immediately on recognition of the mother's disease, has contracted the disease and died.

Lastly, let me add, that a preliminary eruption adds no gravity to the prognosis, not even if purpuric, provided it is confined to the groin region. Of course a general purpuric eruption would be an almost fatal sign.

I laid stress a little while ago on the uncertainty which hangs

over the average case of small-pox till convalescence is well established. Let me illustrate this briefly. Several of our cases have died quite unexpectedly after a few hours of dyspnœa, with a diffuse broncho-pneumonia; one, not an albuminuric, and with a slight rash, died of convulsions; and another almost convalescent died of acute œdema of the glottis.

In conclusion, I desire to say that I have not introduced statistics into this paper, because the number of our cases is still too small to give statistical results of any value. My object has been to say something which might be helpful to others during the presence of the epidemic in the recognition of the disease and its dangers to life.

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### NAIL-BITING.

The *Medical Record* notices some curious investigations by Dr. Berillon, of Paris, into the habit of nail-biting amongst French school children, who seem to be specially addicted to the habit. In one school 20 per cent. of the boys and 52 per cent. of the girls bit their nails. He found that, in both sexes, the age most liable was from 12 to 14 years. "In all the schools where the children have been the objects of careful and attentive observation, the reports have agreed in pronouncing that pupils observed to have the habit are universally the poorest students; that if boys they are inclined to effeminacy, and if girls to slackness. In many there are marked defects of character and less sustained attention. The reports of writing-masters also declare their writing to be, while sometimes well-formed, universally less legible and less regular, and the instructors in the Parisian schools for manual training have pronounced the habitual nail-biters hardest to teach and often unfit for technical education. Among such pupils some have shown brilliant intellectual traits. Some are possessed of an astonishing memory, or show exceptional adaptability to certain arts or certain special studies. Of these "infant prodigies" a large proportion are found to be nail-biters. In such cases the exceptional brilliancy was of unnatural and ephemeral growth, and vanished at the age of fourteen or fifteen. The extraordinary development had compromised the normal evolution of the nervous system. In schools for children from six to eight years old those pupils cited by the matrons as most incorrigible, and upon whom fell the most constant discipline, were found, almost without exception, to be possessed of the habit. In general, the nail-biters were found to be of decided inferiority, both from a point of view of intellectual development and from that of moral sensibility."

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| **Cows.** | Entirely grass fed in summer. Carefully housed, partly grass-fed, and regularly exercised in winter. Inspected at short intervals by experienced V.S. |
| **Vessels.** | Scalded thoroughly by super-heated steam. Lids cleansed by same method. Water used for washing certified by analysis to be safe. |
| **Employees.** | Regularly inspected by a Fellow of the Royal College of Surgeons. Suspended from duty on slightest complaint of illness. |
| **Milk.** | No foreign substance added. Samples frequently taken from our shops and carts by trustworthy inspectors, so as to check all possible adulteration. |
| **Sterilization and Filtration.** | (Patent Process.) Effected by passing the milk through a complicated series of filters, the efficiency of which is evidenced by the removal of all sediment from the milk. Then by subjecting the milk to the action of a sterilizer, it is rendered absolutely free from contamination. |

R. G. NASH,
21 Parkgate-street, Dublin.

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The fact that **Mr. Ernest Hart** has published reports of no less **than 74 epidemics of disease**, afflicting **5,044 persons**, and caused by **pollution of milk**, ought to prove, even to the most sceptical, that in drinking carelessly-collected unsterilized milk they run a very serious risk.—*See Brit. Med. Jour., Sept., 1894.*

THE REPORT OF THE EMINENT BACTERIOLOGIST

## Dr. EDMOND J. M'WEENEY, M.A.,

*Professor of Pathology, University Medical School, and Pathologist to the Mater Misericordiæ Hospital, Dublin.*

"*To the Manager, Lucan Dairy.*

"I have frequently and carefully examined the process of sterilization by heat and filtration to which the milk of the LUCAN DAIRY is subjected under Nash's patent process; and I have personally collected many samples of the milk and made a bacteriological examination of them. The process used is **perfectly harmless**, no foreign substance is added, and the **nutritive value of the milk is not in the slightest degree impaired**, while the objectionable sediment, which exists to a greater or lesser degree in all milk, is altogether eliminated. The keeping properties of the milk are greatly increased by the process of filtering and sterilization. Coupled as it is with the periodic medical inspection of your employees, and the carefully enforced veterinary examination of your dairy cattle, **I consider that your system of dairy supply could hardly be improved upon in point of efficiency and safety.**

"EDMOND J. M'WEENEY, M.D., &c.

"*27th August*, 1894."

# PART II.

## REVIEWS AND BIBLIOGRAPHICAL NOTICES.

*Manual of Diseases and Deformities of the Spine.* By R. L. Swan, F.R.C.S.; Surgeon to Dr. Steevens' Hospital, and to the Orthopædic Hospital, Dublin. Dublin: Fannin & Co. 1894. Pp. 194.

We have perused this book with the greatest pleasure; for it is evidently the work of a man who has had a large experience in the special department of human ills with which he deals. The large bibliography to be found at the end of the book shows how freely the author has drawn from the works of others, and how freely he gives credit to those to whom credit is due, and yet we find that the book before us partakes more of the character of a condensed *résumé* of personal experience and observation, than of a re-hash of the experiences and opinions of others. The book is designed evidently for the use of practitioners more than for students. We do not find the leaded type interspersed throughout the text which indicates to the student where he shall find the stereotyped answers to the stereotyped questions. Nor do we find that systematic arrangement and classification of diseases and their symptoms which are so suggestive of the "grind" room, or the lecture theatre. The author tells in each chapter, in simple language, sometimes a little too condensed, the story of a particular disease, the symptoms by which it may be recognised, what experience has taught him regarding the course it is likely to run, and how best that course may be arrested.

Unlike most books dealing with a particular branch of medicine or surgery, the book before us does not begin with elaborate chapters on the anatomy of the spine, and the physiology of the spinal cord. The author plunges at once *in medias res.* We find ourselves at once face to face with spinal caries. The author gives a very clear and practical account of the disease affecting the cervical, dorsal, and lumbar regions. Among the symptoms of spinal caries he mentions as very significant a fixation of the spines of the affected bones. How-

ever, such a fixation may occur without any evidence of existing disease. This latter, the author is convinced, may result from either rheumatoid arthritis, or from a previous osteitis which may have thrown a bony bridge over the intervertebral discs. A good illustration of this will be found at page 12. The difficulty in diagnosticating at an early stage, caries of the lumbar bodies from lateral curvature, causes many errors, which may be followed by disastrous results. The practical suggestions given by the author for avoiding such mistakes in diagnosis are very clear and simple (p. 17). The chapter on spinal abscess deals very fully with the various forms in which such abscesses present themselves. The author believes that pus in the situation of the disease is invariably formed, but that it may, in an early stage, be resolved, and either disappear by absorption or may be altered by the removal of its fluid constituents into a friable calcareous material. He believes that in many cases, even of well-defined abscess, such resolution may occur, and therefore that operative interference should not be too hastily undertaken. The surgical mind generally will endorse this view. To bring about or assist this termination, the first and most powerful agent is rest to the part, as movement is "undoubtedly the main factor in the production of abscess." The various methods of procuring this rest, the appliances which may be used, the importance of attending to the minutest details of hygiene in connection with these cases are very fully and judiciously described in chapters III. and IV., and well deserve perusal by those who are called on to treat this difficult class of disease. We entirely concur with the author's wholesale denunciation of the treatment of spinal caries by the issue, "so long hallowed by the name of Pott." When certain signs are present, the author considers that a spinal jacket should be applied, and he knows of no better appliance than the plaster jacket of Sayer properly applied. We are glad to find that he believes that the horizontal position on a hammock is the most convenient and best method of applying the jacket—a belief in which we fully concur. In cervical caries, two methods for immobilising the spinal column are usually followed, the jury mast and the pneumatic collar. He gives decided preference to the latter, and describes and illustrates a collar which he devised, and which he has found to provide an easy and yet sufficiently resisting support for the chin. In chapters V. and VI. paralyses consequent on spinal disease are discussed, and the chief diagnostic points which distinguish them from other

forms of paraplegia are discussed. A very interesting account of a paralysis of the lower extremities, common in India, which is caused by eating bread made of the flour of *Lathyrus sativus* is given (p. 88). This condition is termed lathyrism.

One of the most interesting chapters in the book is chapter IX., which deals with sacro-iliac disease. It is not a very common ailment, and the prognosis is generally bad. Erichsen says, "I have never seen a case recover after the full development of the disease, and after suppuration has set in." The symptoms in a case of well-established disease are given in detail (p. 95), and are found amplified in the description of some cases which have been observed by the author. Pressure in the line of the sacro-iliac synchondrosis causes intense pain, so also does any attempt to divaricate the alæ of the ilia. Well-marked lateral deviation of the spine is always observed. In one case a plummet line, dropped from the *vertebra prominens*, fell three inches to the right side of the fold of the nates. In early cases the best treatment is fixation of the joint by a plaster belt surrounding the pelvis. If this give relief to pain, good is likely to result, but if little relief be experienced, and especially if there be a continuance of pyrexia, fixation will avail little, and then the author strongly recommends to open the joint from behind by the trephine or gouge, taking care to penetrate the entire thickness of the interosseous ligament. He relates a very interesting case of a workman, aged thirty-two, with well-marked sacro-iliac disease, in whom this method of treatment was perfectly successful. Coccygodynia and railway spine are discussed shortly in chapters X. and XI.; indeed the latter is a subject of such extent and importance, that in a book of the kind before us, it can be touched on only in the lightest and most incidental manner, and the author does not attempt more. Lateral curvature of the spine is discussed in chapters XII. and XIII., and will be found full of valuable information, the outcome of a very extensive experience. Chapter XIV. deals with torticollis, and is restricted to seven pages. The fringe of the subject is only dealt with, but the latest views respecting it, and the most improved methods of treatment have found exposition. Chapters on "Injuries of the Vertebral Column," and on "Growths in the Vertebral Region," bring the book to a close.

We hope we have said enough to indicate the general character and scope of this book. We can strongly recommend it to senior students and practitioners as a work full of sound and practical

teaching, in which we find little of the abstruse controversies which range round pathological questions, but much which indicates that the author has condensed well the results of a long and extensive experience, and that he has the talent of putting his knowledge into a readable and instructive form for the benefit of others. The book is illustrated by numerous lithographs, which scarcely do justice to the text. We must congratulate the publishers on the admirable manner in which they have brought out the book.

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*A Practical Manual of Mental Medicine.* By Dr. E. Régis. Second Edition. Authorised Translation by H. M. Bannister, A.M., M.D. Utica, N.Y.: Press of American Journal of Insanity.

An original title page is as advantageous to a book as a striking presence is to a man, and Dr. Bannister's translation is fortunate at the outset in possessing this advantage. This is one of the last works published from the press of the Utica Asylum. For many years the *American Journal of Insanity* was printed and published there, as well as many other less ambitious but very useful works. Recently there has been, at the Utica Asylum, one of those crises which periodically disturb the government of all such places. The lay committee and the medical staff having differed—as we understand, originally on the subtle and difficult question of how far it was the medical superintendent's duty to keep the committee men supplied through the winter with flowers and grapes grown in the asylum greenhouses—it was decided by the more powerful party that changes must be made, and one of these has been to suppress the Utica press, to force the *American Journal of Insanity* to seek more hospitable and civilised quarters, and to deprive of a useful and remunerative employment a large number of the unfortunate patients, who as usual are the ultimate sufferers when the medical staff are attacked. But we have not space to more than glance at this somewhat vulgar and brutal exercise of authority, nor can we pretend to any of the inspiration needed for a new Areopagitica. Others must plead for "the liberty of unlicensed printing," which appears now to require an advocate in the sublime and enlightened Republic of the West. The circumstances attending the publication of the work before us form a fine advertisement. Says Dr. Régis in a preface which he has supplied to the translation—"It is

assuredly the first instance of a work, treating of mental alienation, written by an alienist, translated by an alienist, and, under the direction of an alienist, printed and bound by the insane." That it will be the last for some time, though an unfortunate fact, adds an interest to the book, which it deserves, but not requires, being itself an excellent production.

Dr. Régis divides his treatise into two parts, the first treating of mental pathology, the second of the practical applications of mental pathology. As introductory to the first part there is a chapter on the historical aspect of mental medicine which is scholarly though necessarily brief. The first part is further subdivided into two sections, dealing respectively with general and special pathology. Under general pathology the author discusses the essential nature of insanity, its ætiology, the symptomatic elements of mental alienation, and the classification of insanity. Under the head of general pathology he considers the various forms in which insanity occurs. Dr. Régis is not one of those who regard statistics which are supposed to prove the increase of insanity with apprehension. After showing that the increased accuracy of recent censuses must be taken into account, he goes on to say—"We find that the increase of admission, which was annually 12·5 per cent. forty years ago, is to-day only 1·7 per cent." The striking effect which an acute intercurrent affection often appears to produce in cutting short an attack of insanity is referred to. It is not noticed that in many such cases the improvement may possibly be due to the increased individual care bestowed upon the patient. Our author seems to incline to the old belief as to the circulatory conditions in mania and melancholia—"We may suppose," he says, "that maniacal conditions, or those of excitement, correspond to a hyperæmia, and melancholic or depressed states to an ischæmia of certain regions of the brain." We are of opinion that it should rather be the function of modern pathology to warn the student that such a view is merely speculative, and that the arguments hitherto adduced in its favour are crude. The theory underlying it postulates the following—(*a*) That mania is a condition of functional activity; (*b*) That melancholia is a condition of functional inactivity. These postulates are quite unproved. It might be fairly enough argued in the present state of our knowledge that the maniac who rushes about all day talking and laughing does not waste one atom more cerebral energy, whatever that may be, than the melancholic who sits wrapt in the agonised

meditation of death, turned to stone with the force of the anguish he is suffering, It is, perhaps, as true in the pathological sense as in the psychical that—

"To suffer as to do our strength is equal."

In any case the appearances which superficially suggest increased functional activity in mania are only wanting in some forms of melancholia. In *melancholia agitata*, and in the *raptus melancholicus* there may be a degree of motor activity rarely reached in acute mania, while in that very serious condition, commonly known in England as acute delirious mania, the mental symptoms are generally more akin to melancholia than mania, and a condition of acute delirious melancholia has even been described. Now we come to the dilemma—either motor activity is a sign of hyperæmia of the brain, in which case the brain of the sufferer from *raptus melancholicus* or *melancholia agitata* is hyperæmic, which is contrary to hypothesis, or else maniacal delirium (gay and exalted delirium) is a sign of hyperæmia, in which case the brain of the sufferer from delirium acutum would be anæmic, which is contrary to fact. The truth is, our knowledge on these points is quite insufficient for any definite theory, and we should be very careful not to be led away by false analogies, not to forget on the mental side that intensity exists as well as extension, and on the physical, that an overfull cerebral artery by no means connotes an over-nourished and therefore over-active cerebral cell.

Having to differ from Dr. Régis on the point dwelt on above, we are glad to record our emphatic approval of his opinion, expressed in a later chapter, that "insanity is not merely an intellectual disorder but a disease affecting the whole being." This is a thesis which Savage, among later Englishmen, has maintained with much ability.

With reference to auditory hallucinations, we agree with Dr. Régis' dictum—"every subject of auditory hallucinations is essentially dangerous." He notes that "nearly all the insane who are deaf or hard of hearing have auditory hallucinations," and in this our experience coincides with his. He draws attention to the formation of a new vocabulary among the deluded as a sign of chronicity or incurability—a fact well brought out by the labours of the French school. Alteration of the tone and timbre of the voice is noted as occurring in cases of "intense agitation (mania, melancholia, and general paralysis)," but this mode of putting the matter is misleading, the alteration in question being often an

early and important sign of general paralysis, occurring long before the appearance of intense agitation.

In a preface supplied to the first edition by the late lamented Benjamin Ball, of Paris, who stood sponsor for the work of a former pupil, originality is claimed among other things for the author's views upon classification. His classification has certainly the charm of boldness. One experiences a slight shock when one reads a chapter on the classification of insanity in which general paralysis is not mentioned, but one finds after a while that the latter affection is very fully treated further on as one of the "secondary conditions of mental alienation (associated or symptomatic insanities)." We will not now dispute the fundamental reasons for this method of dealing with the subject. In a text book it has the disadvantage of being rather confusing for a student. However, we will for the present accept Dr. Régis' view that secondary or associated conditions are to be regarded as apart, and take up his classification of the primary states. These he divides into—

I. Functional alienations (vesanias, insanities, psychoses); and

II. Constitutional alienations (degeneracies, deviations, mental infirmities).

I. is again divided into (*a*) generalised or symptomatic insanities, and (*b*) partial or essential insanities.

Already there is confusion, for the words "symptomatic insanities," used here to describe a variety of the primary insanities, are the identical words used later on to describe the whole group of secondary conditions of mental alienation. Taking I. (*a*) we find it further divided into (1) mania; (2) melancholia; and (3) insanity of double form. And here we pause to pluck a crow with Dr. Régis, and not only with him but with almost every other framer of classifications whose work we know. In nine out of ten classifications, perhaps in ninety-nine out of a hundred, no mention is made among the acute primary forms of vesania of the commonest of them all—namely, that condition which Krafft-Ebing calls "Wahnsinn," Wille and Meynert "Verwirrtheit," and Korsakoff in his recent classification, following the Italian, "dysnoia." Dysnoia (for we prefer this term to the awkward phrase, "acute confusional insanity," which has been used by the English author who has claimed the largest sphere for this type) comprises the great majority of all the acute cases of insanity, whether idiopathic or symptomatic, that come under observation.

Why clinical observers and the makers of classifications are so slow to recognise this we are at a loss to imagine. When we found all mention of it omitted from M. Régis' classification of primary affections we concluded that he regarded it as a phenomenon recurring only among the secondary or associated; but we have found nothing said of it under the latter head, so we must conclude that our author does not recognise this form, and that all his primary generalised vesanic cases have to fit into the Procrustean bed of mania, melancholia, or insanity of double form.

The partial or essential insanities consist of one group only, here denominated *systematised progressive insanity.* This is identical with the *délire chronique* of Magnan, except that Dr. Régis does not recognise the consecutive dementia as a fourth stage. The three stages (disquiet and hypochondria, persecutory delusion, ambitious delusion) he denotes respectively as *the period of analytic concentration, the period of delusive explication, and the period of the transformation of personality.* Like most observers in these countries we remain sceptical as to the existence of a distinct form answering to Magnan's description. Everyone of long experience has seen a few cases approaching closely to it, and many resembling it more or less distantly, but we cannot satisfy ourselves that it deserves to be raised into a distinct type, and we cannot but say that we consider its separation from the delusional insanity of degeneration a merely fanciful one.

The descriptions given by Dr. Régis of persecutory insanity both as a phase of délire chronique and when it occurs among the degenerates are excellent.

In his second great group, the constitutional alienations, our author includes the (1) disharmonies (defects of equilibrium, originality, eccentricity); (2) neurasthenias (fixed ideas, impulsion, aboulias); (3) phrenasthenias (delusional, reasoning, and instinctive insanity); (4) monstrosities (imbecility, idiocy, cretinism); and (5) simple dementia.

All this sounds logical; it seems, as our friend Bottom says, to "grow to a point" very nicely, but the facts that an attack, in no way to be distinguished from acute mania, supervenes frequently upon a disharmony, and that no observers except the French followers of Magnan can be found to admit the existence of a degenerative delusional type distinct from délire chronique, impair its value. It is indeed one of those classifications which rather express a need than a fact. There ought to be, logically speaking—

nay, one might say there must be—some distinction between accidental and constitutional cases, and this would be a most natural basis of classification. There must be a physical basis for degeneration, and in all probability the brain change is accompanied by other overt changes in general nutrition. Nevertheless, the distinction cannot, at least at present, be made, and all theoretic systems founded upon a supposed differentiation of this kind fail when brought to the test of practice. The physical stigmata of degeneration are really of the most shadowy description, and the whole mass of literature that they have evoked might be summarised in the one short sentence—"People who are ugly and slightly misshapen somewhat more often break down than the handsome and shapely." Further than this one cannot go without flying in the face of one's experience of every day.

Nearly half the work before us is taken up with the great body of conditions which our author is pleased to call "secondary conditions of mental alienation." These include insanities associated with—(1) physiological conditions, as puberty (hebephrenia), old age (senile insanity), menopause (climacteric insanity, &c.;) (2) local visceral diseases (cardiac, genito-urinary, hepatic, &c.;) (3) general diseases (rheumatism, gout, &c.;) (4) disease of the nervous system (epilepsy, hysteria, general paralysis, &c.;) and finally (5) intoxication (alcohol, opium, lead, cocaïn, &c.)

We venture to dispute the propriety of calling most of the affections thus grouped secondary. It is absurd, according to any meaning we can take out of the word, to call hebephrenia secondary to puberty, climacteric insanity secondary to the menopause, or senile insanity secondary to old age. Every male person who lives long enough passes through two of these states, and every female through three, therefore, unless all the race is insane, these insanities must depend upon something else. Physiological conditions of ordinary nutrition and development can no more be said to cause insanity than can the circumstance that we dwell upon a terraqueous globe or any other elemental factor of our being. The truth, it appears to us, lies just the other way. The organisation that cannot endure the strain of ordinary physiological change, which is one of the incidents of our existence, must be already a crazy one. Therefore these insanities are in the truest sense of the word essential, requiring for their development nothing further than the continued existence of the tainted organism. Experience supports this view; we find, for instance,

the break down at puberty or the climacteric most common among those who present a profound hereditary taint.

We have dwelt so much in detail upon Dr. Régis' classification because originality and freshness are claimed for it. It has certainly been carefully worked out, and that it is yet another failure is probably due to the inherent impossibility of framing a wholly satisfactory classification.

The description which our author gives of general paralysis is very excellent. He insists with perfect justice on the existence of dementia as the essential mental characteristic of the affection, and he favours the view, daily gaining ground, that general paralysis is really a group of diseases rather than one disease. The importance of syphilis in the ætiology is fully recognised. Indeed Dr. Régis boasts that a few years ago he was almost alone in France in his opinion on this point. Since then, however, his countryman, Fournier, has gone even further than he.

On the whole, the clinical descriptions in this book are excellent. Occasionally, of course, less emphasis is laid on some one point and more on another than we individually approve, but there is only one general fault to be found with the book, and that is that the author has possibly tried to say a little too much, and that his style suffers from too much condensation. Only a French writer could have got into this little book (it is a very small octavo of not quite 700 pages) all that it contains. We are sorry that we have not left ourselves space to discuss the excellent chapters on treatment, on examination of patients, and on the medico-legal bearings of insanity.

Altogether we can heartily recommend this work to English readers. It contains a necessarily brief but clear and comprehensive account of the views of the modern French school of alienists, too little familiar to most readers in these countries. From this point of view Dr. Régis' book is important. Not only is it an excellent student's text-book, but in its American form it does for French ideas in psychiatry what Spitzka's Manual has done for the German.

The translation is generally very good. There is a blunder here and there—as, for instance, at page 298 where "magazines" occurs for "shops." We do not know whether the French author or his American translator is answerable for rendering Krafft-Ebing's *apathetischer Blödsinn*," "*dementia with aphasia*," or his *primäre Verrücktheit*, "*primitive insanity*," but of course neither is right.

However, on the whole we can congratulate Dr. Bannister on the excellence of his translation. The printing and general get-up of the book, too, are very good, and reflect the highest credit on the now defunct Utica Press.

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## *RECENT WORKS ON URINARY ANALYSIS.*

1. *Practical Uranalysis and Urinary Diagnosis: a Manual for the Use of Physicians, Surgeons, and Students.* By CHARLES W. PURDY, M.D.; Professor of Urology and Urinary Diagnosis in the Chicago Post-Graduate Medical School; Author of "Bright's Disease and Allied Affections of the Kidneys," &c. With numerous illustrations. Philadelphia: The F. A. Davis Co. London: F. J. Rebman. 1894. Pp. 357.
2. *The Urine in Health and Disease, and Urinary Analysis, Physiologically and Pathologically considered.* By D. CAMPBELL BLACK, M.D., L.R.C.S. Edin.; Professor of Physiology in Anderson's College Medical School; Physician to the Glasgow Public Dispensary, &c. London: Baillière, Tindall, & Cox. 1895. Pp. 246.

1. WE are pleased with Dr. Purdy's book. It gives, on the whole, an excellent account of the matters connected with the urine with which it is of practical importance that medical men should be acquainted. It is essentially a clinical book, and does not go deeply into the chemistry of the urine. It is clearly written, and the English, though not everywhere perfect, is better than that which we are accustomed to find in many works published in America. There are numerous illustrations, mostly good and instructive, and a few coloured plates. The publishers have done their work admirably.

The book is divided into two parts, the first of which treats of the composition of urine in health and in disease, and of the modes of examining it—chemical, microscopical, &c. The significance of the presence or absence, excess or deficiency, of the various bodies met with is explained clearly. Dr. Purdy does not believe in the so-called "functional albuminuria;" all albuminuria he looks on as evidence of an existing abnormal state. He appears, however, to go rather farther than most observers when he says, "I have never met with a case of albuminuria, including the so-called functional albuminuria, in which the patient did not

present more or less evidence of departure from the normal balance of perfect health, either local or general."

Of the various tests for albumen, the author prefers the use of acetic acid and potassium ferrocyanide for routine use, because it requires the fewest precautions, and is very delicate. Dr. Purdy mentions what is omitted in so many works on the urine—viz., that in concentrated urines nitric acid in the cold is apt to precipitate the amorphous urates in the form of a light brownish cloud, which may be mistaken for albumen. We have noted that in this part of the work the chemical nomenclature is peculiar. Thus we read of both liquor ammonium and liquor ammonia. We also find $(NH_4)\ 2\ CO_3$, instead of $(NH_4)_2\ CO_3$.

Urinary sediments are fully described and well illustrated. The author has devised a very convenient form of electric centrifuge, with conical-shaped test-tubes, whereby even scanty sediments are easily obtained in a few minutes. In the section on tube-casts, we read that fatty casts are evidence of extreme chronicity of the kidney disease. This, we venture to think, is not quite correct; casts containing droplets of fat are not unfrequently found in the urine of persons who are convalescing from acute Bright's disease.

Part II. treats of Urinary Diagnosis—that is to say, diseases of the urinary organs and passages are considered mainly from the stand-point of the examination of the urine, and Dr. Purdy indicates how much and what information may be derived therefrom in each case. His views are reasonable and sound, and he does not fall into the pit that so many specialists have digged for themselves—viz., of believing that from their special department light may be thrown upon any or every ill that flesh is heir to.

In an Appendix the question of the urine in relation to life insurance is well discussed.

The worst feature about this book is its title. "Uranalysis" is a barbarous word. Our objection to it is strengthened by the fact that it is quite unnecessary—"Urinary Analysis and Diagnosis" would be, in our opinion, a better title. Allowance, however, must be made for a Professor of "Urology."

2. We regret to have to say we have not formed a very high opinion of Dr. Campbell Black's work. Of course it contains a great deal of information, and anyone who studies and masters its contents will acquire an extensive knowledge of urinary

matters; but taking the book as a whole, it appears to us to be a somewhat ill-digested compilation of a multitude of facts. It opens with a description of the anatomy and physiology of the kidney. The letterpress is not very clear, and the figures—with which, by the way, the description in the text by no means agrees—probably represent very well the state of our knowledge of the structure of the kidney some quarter of a century or so ago. In the descriptions of the normal and abnormal urinary constituents, what strikes us most forcibly is the great number of tests and modes of quantitative analysis given in many cases. Instead of contenting himself with a few tried and approved methods, Dr. Black overwhelms us with numbers of tests—good, bad, and indifferent. Some mistakes, too, occur. In the description of the picric acid and potash test for sugar, no mention whatever is made of the necessity of boiling the mixture. We certainly cannot agree with the statement (p. 199) that "the presence of tube-casts indicates inflammation more or less acute;" nor do we believe in the truth of the view, quoted apparently with approval by Dr. Black, that the "so-called bacillus of tuberculosis is found in the urine of persons suffering from phthisis." Nor do we believe that "it thus constitutes a valuable differentiating feature between typhoid fever and miliary tuberculosis of the genito-urinary system." The following statement seems probably true—"the *micrococcus* and *bacillus urinæ*, which are the cause of the decomposition of urea, may also be found in the urine." If not in the urine, where would they decompose urea?

We would also point out to Dr. Black that his "double phosphate of soda and ammonia, $NaNH_4PO_4$" (p. 201), could not possibly exist in urine or anywhere else; that "$1\frac{1}{2}$ grains to the ounce is not equal to 3 per cent." (p. 161); and that 1 grain is not equivalent to 0·6480 gramme. (Appendix.)

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*The Dyspepsia of Phthisis: its Varieties and Treatment, including a Description of certain forms of Dyspepsia associated with the Strumous Diathesis.* By W. SOLTAU FENWICK, M.D., B.S. Lond., M.R.C.P.; Assistant-Physician to the Evelina Hospital for Sick Children, &c. London: H. K. Lewis. 1894. Pp. 203.

THE subject of the disorders of the digestive system as occurring in the phthisical and in those who are phthisically disposed is one which certainly demands our most careful attention, as these

disorders are among the greatest obstacles to treatment met with in those threatened by or affected with pulmonary tuberculosis. Dr. Fenwick has evidently studied these disorders carefully; he has consulted most of the available literature of the subject, and, in addition, has had the opportunity of gaining extensive experience in the Brompton Hospital for Consumption. The statistical records of this hospital have been worked up with care; information derived from 2,000 necropsies in this institution is frequently utilised.

After a chapter on certain diseases of the stomach, such as cancer, whose occasional occurrence in consumptive patients is merely an accidental coincidence, the author describes the morbid changes met with in the gastro-enteritis of phthisis, and shows how common it is to find the mucous membrane of the alimentary tract the seat of a chronic form of inflammation, in which the adenoid and the connective tissues become increased in amount, and the epithelial cells suffer more or less degeneration. These changes are most commonly found in cases of chronic phthisis, and Dr. Fenwick believes them due to the absorption of certain toxic substances which are manufactured in the pulmonary cavities. He then describes a variety of dyspepsia met with in strumous children, of which sudden attacks of violent pain are the most prominent symptom. Constipation generally co-exists, and the author finds the most successful treatment consists in improving as far as possible the health, and using aperients (cascara or aloïn) regularly.

Then Dr. Fenwick describes—(1) a variety of dyspepsia which is apt to precede phthisis, and of which one of the most marked features is the dislike of fat; (2) the varieties met with in early cases; and (3) those which occur towards the close of the case. The last chapter discusses fully the frequency of perforation due to tuberculous lesions of the intestinal tract, its usual seats, and its symptoms. We do not know elsewhere any so complete description of this lesion, which terminates a considerable number of cases of consumption; it was found 23 times in the 2,000 necropsies at the Brompton Hospital to which the author refers.

While there is a good deal of valuable information in this work, we think that a certain amount of compression might have been judiciously exercised; a little more conciseness would have made the descriptions of symptoms more striking; and in the remarks on treatment there is a good deal of repetition and not much that is new. However, taking the book as a whole, it represents a

large amount of investigation, and we welcome it as a useful contribution to an important subject.

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*On the Principles and the Exact Conditions to be observed in the Artificial Feeding of Infants; the Properties of Artificial Foods, and the Diseases which arise from Faults of Diet in Early Life.* By W. B. CHEADLE, M.D. Cantab., F.R.C.P.; Physician to St. Mary's Hospital; Consulting Physician to the Hospital for Sick Children. Third Edition, revised and enlarged. London: Smith, Elder & Co. 1894. Pp. 248.

THE aim and scope of this book are exactly explained by the title, and we have much pleasure in expressing our opinion that Dr. Cheadle has succeeded admirably in his task, and has produced a book full of sound and judicious information upon a most important and often ill-understood subject. That it has been tried and found of value is shown by the fact of two editions being now out of print; we feel confident that this third will be succeeded by yet other editions.

It opens, as all works on the subject should, with a careful investigation of the natural food of children. Very careful analyses of a number of specimens of human milk were made for Dr. Cheadle by Dr. Luff, and with the data thus obtained the properties and qualities of other kinds of infant's food are compared. Each—cows' milk, asses' milk, artificially prepared foods, &c.—is carefully considered; its advantages and defects are pointed out, and we are clearly shown how nearly or otherwise it approaches to the six essential conditions laid down by Dr. Cheadle, viz:—

(1.) The food must contain the different alimentary elements in the same proportions which obtain in human milk.

(2.) It must possess the anti-scorbutic element.

(3.) The total quantity in twenty-four hours must be such as to represent the nutritive value of one to three pints of human milk according to age.

(4.) It must not be purely vegetable, but must contain a large proportion of animal food.

(5.) It must be in a form suited to the physiological condition of the digestive function in infancy.

(6.) It must be fresh and sound, free from all taint of sourness and decomposition.

The book is increased in value by the introduction of a number of illustrative cases, which show the evil results arising from improper kinds of food and the appropriate measures for their cure.

We could have wished that in treating of the various modes of artificial feeding Dr. Cheadle had mentioned by name some of the more widely known proprietary foods (to which he refers in a general way), and had expressed his opinion as to their relative value; as these foods are very extensively used, we think an expert opinion on the subject would have been of considerable value. Perhaps the author may see his way to do this in his next edition.

In the second half of the work the author discusses the diseases which arise from improper or insufficient nourishment, especially rickets and scurvy. Of the causation of the former disease he says—"The only constant factor always present is the food factor; the vast majority of cases of rickets arise directly in connection with food." Want of animal fat and of proteids are the chief and may be the only factors that produce the disease; possibly deficiency of earthy phosphates may be a factor of some influence in certain cases. He shows how rickets can be cured by a suitable diet.

We have studied Dr. Cheadle's work with pleasure and profit, and warmly recommend it.

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*Pulse-Gauging: a Clinical Study of Radial Measurement and Pulse-Pressure.* By George Oliver, M.D. Lond., F.R.C.P.; Author of "Bed-side Urine Testing," "The Harrogate Water," &c. London: H. K. Lewis. 1895. Pp. 174.

For many years Dr. Oliver patiently used the sphygmograph until at length he satisfied himself that its clinical value was not very great. Being, however, of the opinion that some instrumental mode of examination of the pulse might be devised, which would give more definite information than the finger, he has constructed the arteriometer and the pulse-pressure gauge.

The first part of the book deals with the arteriometer, whereby the calibre of the radial or other artery is determined. For all mechanical details we must refer our readers to Dr. Oliver's little book. By means of this instrument he finds that in health the calibre of the arteries is always varying within certain limits.

The calibre is altered by exercise, changes of posture and temperature, the stages of digestion, and some other factors. In various forms of disease these normal changes of calibre are absent or altered. For example, in chronic interstitial nephritis, myxœdema, syphilis, gout, arterio-sclerosis, the postural variation is lost. Abdominal irritation—*e.g.*, an operation for strangulated hernia—causes contraction of peripheral arteries. Dr. Oliver has found the instrument of use in the diagnosis of several diseases, especially those mentioned as showing absence of the postural variation; in fact this observation in some cases led him to the diagnosis of syphilis, and to the discovery that a now almost forgotten chancre existed thirty years before. In the question of treatment, he also has derived information from the instrument—thus, when the maximum calibre is persistent in the recumbent position, tonics and rest are indicated; when the normal postural variations are abolished, iron and strychnine are not well borne.

Part II. treats of pulse-pressure. By means of an ingenious gauge the arterial pressure is ascertained both at its highest and lowest points—*i.e.*, the pressure of the pulse-wave and the pressure in the interval between two waves. Many gauges have been devised which give the former measurement. Dr. Oliver says his is the only one which will give both figures. He shows how by means of this instrument not only abnormally high and low pressure pulses may be discovered with certainty, but also how the pressure of to-day may be accurately compared with that of, say, a year ago; it also throws a good deal of exact light on the effects of treatment.

We cannot as yet express any opinion as to the probable value of these instruments, especially of the arteriometer. We must, however, say that Dr. Oliver's methods of examining the arterial system deserve to be carefully investigated, and that to him much praise is due for the care and ingenuity he has displayed in his work.

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*Helps in Sickness and to Health: Where to Go, and What to Do.* By HENRY C. BURDETT. London: The Scientific Press (Limited). 1894. Pp. 484.

IT is hard in a short space to give an idea of the comprehensive scheme of this book, as it deals with almost everything which comes under "Sanitary Science." Yet the writing is so clear,

and tempting excursions into technicalities are so successfully avoided, that the effect is not confusing, and much information can be easily and pleasantly gained from its pages.

Part I. deals with the Nursery, Schoolroom, Person and Habitation. The colouring of the nursery is fully dealt with, the author rightly condemning white ceilings, advocating French grey or blue-green instead, but saying nothing in favour of pink or yellow, which are so grateful to many eyes. His ideas as to the beauty of paper centres for ceilings also show that in matters of decoration he is somewhat easily pleased. The feeding of infants is well and clearly treated, sample diets for different ages being given. The only fault is that the meals recommended are rather too few. Many children will require to be fed oftener than five times in twenty-four hours. Indeed some healthy children thrive on many more meals than Mr. Burdett allows.

In some points the information seems rather behindhand. Surely the following paragraph does not describe a state of things existing to any extent, if at all, at the present day :—

"The horrible way in which mothers are often made to spend their lives for the first month after their confinement is disgusting and repulsive. A change for the better has certainly been made in their diet, but it is still believed by many that foul air is poisonous to lying-in women, and with the baby they are made to pass the days in a room hermetically sealed against the entrance of fresh air, a roaring fire amplifying their torture. In this unwholesome atmosphere the poor infant spends the first months of its life."

Under the heading of "School," the author deals fully with eyesight; but, curiously enough, does not say anything about what is really such a pressing requirement—the periodical examination of teeth. The faults of boots are pointed out, but the remedy should be more clearly pointed out—to keep the inner edge of the boot straight, so that the great toe shall be in direct line with the inner edge of the foot.

The statement that garters are now uncommon seems to be of the nature of "looking forwards."

The chapter on Food and Drink is too condensed to be of much use, and the paragraphs on alcohol are chiefly taken from Dr. Parkes' "Manual of Hygiene," later investigators being ignored. Curiously enough, Dr. Parkes' papers in the Proceedings of the Royal Society seem to have escaped the author, and the effect

of alcohol on the heart is not mentioned, although the old-time "physiological dose" of 1½ oz. of absolute alcohol is resurrected.

Dr. Wilks' axiom, that "change of work is true recreation," is approved, and the cultivation of a "hobby" advised; but photography does not occur in the list of hobbies recommended.

The chapters on the choice and structure of the house present no novelties, and have the usual illustrations first introduced by Dr. Pridgin Teale. But why on page 149 does the author, in trying to illustrate "party walls above the roof," omit the party wall the rest of the way down?

A chapter on "Sanitary Powers and Duties of the Citizen" is well written and will be found useful.

Part II. deals with "Helps in Sickness and to Health," and contains the kind of information so widely distributed of late years in ambulance handbooks. It would be useful to group the poisons, in addition to dealing with them and their antidotes separately. In case of poisoning there is little time to consult books, and general rules are most likely to be remembered.

Part III. has 120 pages, and gives a list of all institutions in England and Wales founded for the relief of sickness or bodily infirmity. The various institutions are arranged in classes, and the terms of entrance, hours of attendance, and so-forth, are given. This part will be found very helpful.

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*Asthma and Chronic Bronchitis.* By JOHN C. THOROWGOOD, M.D., F.R.C.P.; Senior Physician to the City of London Hospital for Diseases of the Chest; Consulting Physician to the West London Hospital, &c. A New Edition of "Notes on Asthma and Bronchial Asthma." London: Baillière, Tindall & Cox. 1894. Pp. 136.

DR. THOROWGOOD has evidently had an extensive experience of the symptoms and management of asthma; consequently there is a great deal of valuable information on the subject to be found in the work before us. However, want of order and arrangement is prominent everywhere, and greatly detracts from the value of the book. Neither in describing symptoms, pathology, or treatment do we find that regular and methodical sequence of ideas which so greatly assists the reader in following the meaning and apprehending the views of the writer.

Apart from this defect, the book is useful; many illustrative cases are described at length; and many hints are given as to the treatment of that most troublesome complaint, asthma.

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*The Dental Cosmos, a Monthly Record of Dental Science.* Published by the S. S. White Dental Manufacturing Co., Philadelphia. Vol. XXXVII. No. 1. January, 1895.

Among many articles of interest—more especially to the dental practitioner—we notice one from the pen of Sidney S. Stowell, D.D.S., headed "Local Exercise and Dietetic Influence upon the Teeth," wherein the author urges very forcibly that much of the degeneration of our dental apparatus, about which one hears so often to-day, is due to the great preparation which our food now undergoes previous to being served at table, thereby lessening the work which the teeth were destined to perform, and instances the finely-ground flour used in bread now-a-days as compared with the good old whole meal, now seldom seen, which use to give these organs more ample scope for masticating operations.

A paper upon "Facial Neuralgia," by M. H. Cryer, M.D., D.D.S. Philadelphia, would also well repay perusal. We also notice an excellent photogravure of a tablet erected lately in Hartford, Conn., to Horace Wells, the discoverer of anæsthesia.

An exhaustive discourse upon the "Relative Penetrating Powers of Coagulants," in connection with the treatment of root-canals in teeth, together with very many other articles of interest, go to make up a journal which, enhanced by excellent paper and printing, reflects credit upon the publishers.

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*Quain's Elements of Anatomy.* Tenth Edition. Vol. III., Part III. Organs of the Senses. By Professor Schaefer. Pp. 165. London: Longmans, Green, & Co.

This is the sixth part of our standard English anatomical text-book which has reached us since the tenth edition began to appear. Two parts more—one on the viscera, the other on the peripheral nerves—will, we understand, complete the work. We have already noticed five parts, which treated respectively of embryology, general histology, osteology, myology angeiology, &c., and the central nervous system, while the part before us is devoted to the

organs of the senses, and comes from the pen of Professor Schaefer.

On taking a general look through, the first impression is that much new matter and many new illustrations have been added. This ought to commend the book to us; but, unfortunately, the feeling of satisfaction is very much lessened in our mind by the way in which many of the new pictures are reproduced. In Quain we have always had clear, well-cut, distinct and striking, although small, woodcuts, the contrasts well marked, and the details brought out without hesitation or uncertainty. Such are most of the illustrations of the five parts of the present edition which we have already noticed—indeed we are of opinion that the illustrations of the part devoted to osteology surpass those of any other anatomical text-book we have ever seen. But, in the part before us most of the new pictures are produced by a process which is unsatisfactory in the majority of cases, particularly where detail is required. All we used to value in the old illustrations—their brightness, their clearness, and their precision—is absent. True, the new pictures are large, much larger than the average of those of former editions, and this is a great advantage. Still, we would be glad to sacrifice something in the matter of size if we got in return better definition.

On going carefully through the book, our first impression is confirmed. A great deal of good and important new matter has been introduced into the present edition, as might, indeed, be expected, seeing that the methods of Golgi, which have revolutionised so many of our anatomical ideas, have come fully into operation, and that the excellent work of Retzius, particularly in the region of the internal ear has appeared, since the last edition was issued.

The first seventy pages are devoted to the eye. The description of the tutamina oculi is improved, and several points made clearer than in former editions. However, we are not at all satisfied with the account of the capsule of Tenon: the place of the new illustrations of this structure might be better occupied by descriptive matter. We think that some confusion will arise from the indiscriminate use of the terms "lachrymal sac" and "nasal sac," as applied to the same structure. In the description of the ball of the eye there is nothing very special until we come to the retina. We would just remark on the way that the descriptions of the ciliary vessels, of the choroid, and of the iris, might be

improved in certain directions. For instance, the important surgical connections of the ciliary vessels are not made clear; and again, there is no statement as to the position of the muscular fibres in the iris; but for the illustrations we should not discover that they lie in the posterior part of that structure.

The retina is well and clearly described—in fact, it is one of the best bits of work in the book, containing, as it does, the results of the application of Golgi's methods to this part, which have thrown much light upon its anatomy. The account of the eye is completed by a very full list of the literature of the subject running into four pages.

The eye is followed by the ear, to which fifty-nine pages are devoted. The external ear is treated much as in the last edition. Notwithstanding the new pictures, the description of the fissures in the cartilage of the pinna is still obscure, and that of the intrinsic muscles conventional—for instance, the antitragus still finds its insertion into the tail of the helix. The account of the external auditory meatus is good, and much of it is new.

The middle ear in general is well described, and many important points, not noticed in previous editions, have been introduced. While we agree with and commend the general description, there are some things in it to which we take exception. In the first page devoted to the tympanum, there is a picture taken from Testut, a section of the temporal bone, to show the tympanic cavity; the illustration—which is supposed to be from nature, and is marked *natural size*—shows a tympanum which measures from roof to floor 23 or 24 mm., almost an inch, while in the text this dimension is given—and correctly—as being 15 mm. The mistake is Testut's—the picture should certainly not be marked "natural size." This figure is repeated on page 99. Again, on page 89, the length of the malleus is given as from 18 to 19 mm. The real length of the malleus is little over 8 mm., occasionally reaching to 9 mm. This, we need hardly say, is a serious mistake, which we can attribute only to haste or want of care. On the next page the handle of the malleus is described as "passing downwards with an inclination *forwards* and inwards," while figs. 91 and 92 show it passing not forwards but *backwards* and inwards. In former editions the orientation of fig. 91 was different, and agreed with the description, forwards and inwards. The fact is that the handle of the malleus has really a slight inclination backwards, and the position represented in the two figures is about

correct. On page 94 no origin whatsoever is given for the stapedius muscle. Regarding the action of the tensor tympani on the malleus, we are told that the muscle draws the whole bone and the membrane inwards, and that it exerts but little rotating power upon the malleus. This is questionable. We are strongly of opinion that the muscle does produce a distinct rotation of the malleus round an oblique axis, passing through its neck, and that the contraction of the tensor draws the handle of the malleus and the membrane in, while the head goes outwards.

For the description of the internal ear we have little but praise. The part is excellently described, a great deal of new matter is added, and Retzius' work is fully recorded. Even in this part, however, we have come across some slips and misprints. On page 105, line 16 from top, we find the sinus superior (utriculi) described as being formed by the conjoined limbs of the superior and *external* semicircular canals, instead of the superior and *posterior*; on page 116, last line, *breadth* has crept in instead of *length*, which is very misleading; and on page 123 *omic* is printed instead of *osmic*. With the exception of these minor points, and one other, to which we shall refer directly, we think the description of the internal ear remarkably good, clear, full and intelligible. Unfortunately this section concludes with a table of measurements, in which the sizes of twenty-nine different parts of the cochlea are given, and in every case the measurement is a thousand times too small. The table is headed by a statement that "the following numbers show the dimensions in *micro-millimeters*," whereas they really show them in *millimeters*. In other words, the word "micro-millimeters" has found its way into the heading instead of "millimeters," and remained there. This is a most serious error, and one which, of course, has already attained a wide circulation. Would it not be well to have a slip, with the correction, inserted opposite the page bearing the numbers in any further copies issued by the publishers?

An account of the literature of the ear follows; it is succeeded by seventeen pages devoted to the nose and nasal fossæ, and four pages to the tongue, all of which is satisfactory in every way. The book is completed by a short chapter on a "Comparison of the Modes of Arrangement of Sensory Cells and Nerve Fibres in the different Organs of Special Sense."

As regards the illustrations, of course a great number are old and tried friends from the ninth edition, but there are many new

ones taken largely from Testut, Merkel, Retzius, and other sources, as well as several original pictures by the author. We have already expressed our opinion of the process by which most of the new figures have been reproduced; we think it responsible for spoiling many illustrations that would otherwise have been pleasing and useful. We do not wish to be censorious, but what could be more distasteful to anyone with the slightest artistic taste than figures 12, 13, and 14? The same remarks will apply to figs. 22, 36, 93A, 93B, 96, 154, 155. They are not only artistically, but also, owing to their indistinctness and want of contrast, anatomically unsatisfactory. What a contrast between them and some of the old figures—for instance, fig. 167! On the other hand, we can commend some of the new illustrations, amongst them those from Cajal on the eye, Retzius on the ear, and those from Arnold on the nose. We must add, however, that our commendation would be much warmer were the pictures well reproduced.

We have written our opinion freely about the book before us. We recognise in "Quain" our great national anatomy. Its reputation is a matter of interest to all of us, and we are proud of its eminence. We were able to commend in the warmest terms all the volumes that appeared up to this; but, while we see a great deal to praise in the part before us, particularly in the portions of it which are more purely histological, and which, we think, are treated in a masterly style, there are still in it some inaccuracies of such a kind as should not be found in a work of its position and importance. We admit that the points to which we have called attention are merely slips or oversights, the result of haste or insufficient care, but oversights so marked should not be allowed to appear in such a work—haste or want of care should have no hand in building up a volume of "Quain."

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*On Chorea and Choreiform Affections.* By WILLIAM OSLER, M.D., F.R.C.P.; Professor of Medicine, Johns Hopkins University. Baltimore. Pp. 125. Large 8vo. 1894.

THE thoroughness which characterises Professor Osler's work is not wanting from this, his latest publication. It contains a full exposition of the natural history, causation, pathology and treatment of chorea, so far as these are at all defined; and, not the less valuable part of the book, it goes over the same ground in regard to a number of other diseases of choreiform character. He

points out that the genuine St. Vitus's dance was a sort of epidemic convulsive disorder which manifested itself in some excitable communities in the middle ages, and even so late as the early part of this century in Kentucky and Tennessee during periods of intense religious enthusiasm. Perhaps the feverish revolutions of the dancing dervishes are a still surviving exemplification of the same condition.

The discussion of chorea proper is largely based on Dr. Osler's own experience, and on the records of cases treated in the Philadelphia Infirmary for Diseases of the Nervous System, but almost all authorities of value are quoted in addition. Needless to say most of the facts of the disease have been told before, in one form or another—we do not know of any work in which so many can be found together—and it is a comfort, in this sceptical age, to find most of our notions about chorea corroborated. Its rheumatic connections, its association with heart disease, its tendency to recovery and to recurrence, its incidence in pregnancy, and many other points remain unshattered by statistics or by theory. On the other hand, there is some valuable formulation of facts. Thus, chorea may be simple, severe, or maniacal. In this last condition the bodily trouble may be overlooked, and the patient committed to an asylum. "There is no known disease in which endocarditis is so constantly found, *post mortem*, as chorea." This disease is almost always of the mitral valves; it is not a fact that endocarditis in chorea is, *per se*, less injurious than it is in other conditions. In 19 out of 73 recent autopsies collected by Professor Osler pericarditis was present, and in 17 of these it was associated with endocarditis.

On the pathology of chorea, happily, one may say, Prof. Osler is brief—the more indefinite a subject the more temptation to be lengthy. From the reports of cases we gather that there is, perhaps, most to be said in favour of a meningo-vascular causation for the disease. Pianese "claims to have isolated a bacillus from the nervous system of a choreic patient, which he was able to cultivate successfully. Animals inoculated died with muscular twitching and convulsions, and from these animals the same bacillus could be obtained in pure cultures from the central nervous system." If this be so we should be thankful that so many unsatisfactory theories could be laid to rest for ever.

Under the head of treatment the propriety of guarding against brain- and eye-strain at school, against rheumatism and against all

conditions which interfere with nutrition, is insisted on. For the attack itself the more important measures advised are rest and seclusion, nutritious diet, arsenic given carefully in full doses; in chorea insaniens the wet pack or bath, chloroform, chloral, or bromides, the prevention of bed-sores, and efficient feeding.

After a chapter on simple and complex convulsive tics, illustrated by cases, comes a full and valuable account of Huntington's chorea. "There are three marked tendencies in this disease," wrote Huntington in 1872, and his description has not been improved upon since, "1. Its hereditary nature; 2. A tendency to insanity and suicide; 3. Its manifesting itself as a grave disease only in adult life." Full accounts, graphic in detail, are given of several cases of this uncommon and most interesting disease. An appendix contains an analysis of seventy-three fatal cases of ordinary chorea.

This book can be recommended as fulfilling most thoroughly the promise of its title.

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*A Text-Book of the Diseases of the Ear.* By Dr. Josef Gruber, Professor of Otology in the University of Vienna. Translated from the Second German Edition, and edited with additions by Edward Law, M.D., C.M. Edin., M.R.C.S. Eng., and Coleman Jewell, M.B. Lond., M.R.C.S. Eng. With 165 Illustrations and 70 Coloured Figures on two Lithographic Plates. London: H. K. Lewis. 1893. Roy. 8vo. Pp. 648.

This being the second edition issued within a very few years proves that the book has been well and widely received by the profession; it also renders it unnecessary for us to enter much into details regarding its merits.

The justification for the appearance of an English edition of this text-book will (says the translator, in the preface to the first edition) be at once admitted, both on the ground of the position of the author in regard to the specialty, and also from the universal recognition of the value of his treatise by those acquainted with the original.

Reference must be made to the exceptional excellence of the illustrations, and more especially to the coloured figures in the plates, which form, indeed, an almost complete atlas of the appearances exhibited by the tympanic membrane in different pathological conditions.

In the present edition the translators have added much new matter and many references and annotations. These have been inserted with the author's sanction, and bring the book well up to date.

A great deal of attention, and more than 100 pages, are devoted to the anatomy of the temporal bone and the organs of hearing. This is most carefully done, and will be found of the greatest value to all who seek to obtain specially accurate knowledge of those parts.

The translators have done their part to perfection, and deserve the hightest praise, and the printers and publishers leave little to be desired.

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*Diseases of the Ear.* By A. MARMADUKE SHEILD, M.B. Cantab., F.R.C.S. Eng. With 4 Coloured Plates and 34 Woodcut Illustrations. London: Cassell & Company, Limited. 1895. 8vo. Pp. 266.

THIS little book, says the author, is an attempt to place before students and practitioners, in a condensed and easily-readable manner, those varieties of aural disease which admit of rational treatment, in accordance with the established principles of general surgery. No attempt is made to rival in size and scope the exhaustive treatises on the subject which have lately appeared.

A desire to economise space explains the absence of extensive references, and may serve as an apology for the brevity of the first chapter on the anatomy and physiology of the organ of hearing. The bulk of the work is drawn from an experience of seven years in the Aural Department of Charing Cross Hospital, which fact may explain some diversities from generally-received ideas. Stress is laid on such subjects as mastoid disease, sinus pyæmia, and adenoid growths.

The book is not a very important addition to aural surgery, but will serve, perhaps, to help students to master some of the preliminaries.

We cannot agree with the author (p. 42) that the use of the Eustachian catheter is "*inadmissible*" in children; but we can easily see how he arrived at so erroneous a conclusion, for a few lines further down the page he directs the catheter to be passed with a "*rapid*" movement. In our experience the very

reverse of this—viz., a very slow movement of the catheter is indicated in all cases, but most especially in children. The same remarks apply to the "three movements" which (on the next page), he says, "should *not* be separated by any interval of time, but be continuously executed."

Plates II. and III. are a very useful addition to the book, but their use is seriously militated against by inaccuracy of description. It is a pity that there is no indication given as to whether the picture represents a right or a left drum, more especially as it is hard to reconcile the drawing, Plate II. F, with the description given, which states it to represent a "small circular perforation situated *anteriorly*," whereas to any unprejudiced observer it would appear to be situated posterior to the tip of malleus. The colouring is rather vivid, and the extreme prominence of the short process of the malleus is not in accordance with our experience.

With these few exceptions the book is accurate yet terse in its descriptions, and we feel sure it will obtain a ready sale amongst students of otology.

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*A Treatise on the Diseases of the Ear, including the Anatomy and Physiology of the Organ, together with the Treatment of the Affections of the Nose and Pharynx which conduce to Aural Disease.* By T. Mark Howell, F.R.C.S. Edin., M.R.C.S. Eng. London: J. & A. Churchill. 1894. 4to. Pp. 720.

The author states that the aim which he has steadily kept before him throughout the book, when dealing with the causes, symptoms, and treatment of disease of the ear, and treatment of the affections of the nose and pharynx which conduce to aural disease, has been, before all things, to be of service to the members of the profession who feel themselves drawn to give special attention to a department, the importance of which, we regret to say, is still only partially recognised.

The book, which is well printed and nicely got up, has 122 illustrations.

Chapter XXI., on "Diseases of the Nose, Pharynx, and Naso-pharynx, connected with Diseases of the Middle Ear," is very full and satisfactory, and gives a good epitome of the surgical requirements, &c., of the naso-pharyngeal space.

The book—written, as it is, by one whose opinion on aural

matters stands so high—must command considerable attention. It is written in a thoroughly practical style, and the arrangement is that considered best suited to the practical treatment of his subject. He differs in many points from the current writers, but in all such cases he states his reasons.

We congratulate Dr. Howell on having produced so readable, accurate, and comprehensive a work on ear diseases.

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*A Short Sketch of the New York Medical College, with its Charter, and a Complete List of its Officers and Graduates.* By EDWIN HAMILTON DAVIS, A.M., M.D. New York. 1883.

WE are indebted to the courtesy of Miss Zaidee S. Davies, of New York, for a copy of this Obituary Notice of an institution which did good work in its day—a day of only fourteen years, 1850 to 1864. The necessity for publishing a list of its graduates arose from the illegitimate sale by a dismissed official of some thirty blank diplomas, which had been more or less damaged by rain during a violent storm which blew in a skylight in 1858. The New York Medical College opened in October, 1850, the third medical school established in the city. It strove hard to improve medical education; it lengthened the term and introduced summer courses; it was the first to adopt the recommendations of the American Medical Association, and the first to establish a chemical laboratory for the practical instruction of students. There was no graduation-fee; it died of starvation. Students preferred institutions from which degrees could be obtained on easier educational terms. "When it ceased to exist a majority of the Faculty were called to honored positions in other schools, and her alumni may be found both in the army and navy, as well as occupying chairs in some of the most distinguished schools in the country."

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TREATMENT OF THE INSANE.

WE desire to draw the attention of the profession to a paper in the *Montreal Medical Journal* for December, 1893, entitled "The General Practitioner and the Insane." The author is Dr. J. V. Anglin, Asst. Sup. Protestant Hospital for Insane, Montreal. He disclaims originality; but the article is thoroughly practical, and will remind general practitioners of many matters, small but not unimportant, which are apt to be forgotten in the comparatively rare cases in which they have to deal with insane patients.

# PART III.

# MEDICAL MISCELLANY.

*Reports, Transactions, and Scientific Intelligence.*

*The Indian Medical Congress.* By W. J. Buchanan, B.A., M.B., &c., Univ. Dubl.; Surgeon-Captain, Indian Medical Service; Surgeon, Presidency Hospital, Calcutta; late Travelling Prizeman, Univ. of Dublin.

The first Indian Medical Congress has come and gone. Calcutta was the scene in the last week of December, 1894 (from the 24th to the 29th inclusive), of a great gathering of medical men, European and native, from all parts of India. The members numbered over 800. The attendance would even have been greater had the Government given more facilities for leave—the twelve days granted sufficed for members who live within a few hundred miles of Calcutta, but was not enough for many others in up-country parts of Bombay, the Punjâb, Madras, and Burma. The whole affair went off without a hitch. We will not say that any new truths were announced, or any old controversies settled, but something has been done to mitigate that feeling of isolation which is the bane of professional life in India. The Indian Medical Service naturally took the chief part in the proceedings; the Medical Staff, too, were well represented in the department of Military Medicine and Surgery; the few unofficial European medical men in India were present in considerable proportion, as was also the large and increasing body of native practitioners. The Congress was presided over by Surgeon-Colonel R. Harvey, M.D, D.S.O., and a worthy president he made.

The work was divided into seven sections, each with a president—*e.g.*, Dr. Crombie, of Calcutta; Dr. Lawrie, of Hyderabad; Dr. King, of Madras; Dr. Watt, of Calcutta; and the Hon. W. R. Kynsey, from Ceylon. The Government of Ceylon was very generous, sending five medical men and paying their expenses. Then we had Professor Reid, from Aberdeen; Dr. Bickle, from Australia; Mons. Gallay representing the French settlements in India, and Mr. Ernest Hart. The Irish Universities were not directly represented. The visit of the

last-named gentleman created considerable stir in more ways than one. He did not hesitate to freely denounce the dilatory ways and backwardness of the Government in sanitary matters, and in a manner which no official member could venture to do. His speech had some dramatic effects—as, for instance, when he pulverised Lord Elgin's extraordinary statement in his opening Address that the best test of sanitary enthusiasm and belief was unlimited patience—the old doctrine of *festina lente*. Mr. Hart showed truly enough that in the way of scientific equipment and laboratories India was much behind the world. This has been preached by medical men in India for years, but the Government has turned a deaf ear and pleaded impecuniosity. He urged the Government to set apart a certain number of their officers in each province for purely laboratory work and scientific research. He said truly that civil surgeons, as the men of the Indian Medical Service in civil employ are styled, could not be expected to do much in that line without any equipment, and subject to frequent transfers. These men, he went on to say, in addition to being the civil surgeons of a large district containing from one to three million inhabitants, were also superintendents of vaccination, governors as well as medical officers of jails, superintendents of lunatic asylums, meteorological observers and reporters. Besides the charge of large hospitals with from two hundred to a thousand major operations in the year, the same man was general practitioner and consultant of his district, had yearly to send in and write long reports on fifteen or more dispensaries on vaccination, on the sanitation of all municipalities, on jail manufactures and the health of the prisoners, not to speak of having to do, and give evidence upon, from 100 to 300 *post-mortem* examinations annually. "In any civilised country," said Mr. Hart, "this would be the work of twenty men." So much all agreed to, but his further remarks have excited a good deal of feeling. He says he came out as the apostle of pure water. "You can drink cholera, you can eat cholera, but you cannot catch cholera." But this was and is the gospel of Macnamara. Mr. Hart is apparently under the impression that medical men in India believe in the obsolete theories of Surgeon-General Cunningham. It may safely be said that not five per cent. of medical officers in India ever believed in Cunningham's mysterious movements of cholera. That Dr. Cunningham's unscientific views have been an obstacle to sanitary progress in India there can be no doubt; but to imagine that, because an antiquated order still stands in the military regulations about a regiment marching "at right angles" to the wind on evacuating a cholera-stricken spot, therefore all medical officers believe in the air-borne theory of cholera diffusion is absurd, and unjust to us in India, as it is to the schools at home where we took our degrees. Does Mr. Hart imagine that graduates of London, Cambridge, Dublin, Edinburgh, or Aberdeen have never been taught anything more recent

than that on the subject of cholera? He must know that more than one brilliant medical officer in recent years has been punished by being sent to permanent military employ for his heresy in preaching the water-borne theory of cholera. Over-statement, however, is frequently useful as a rhetorical device for attracting attention. That Mr. Hart's remarks will do good we have not the slightest doubt.

Mons. Haffkine, who has now been with us in India for close on two years, was most enthusiastically received by the members of the Congress. He made a complete statement of the results of his inoculation work against cholera, and showed how hopeful he still was, and that all the evidence so far was in favour of his method. We have not space here to mention a tithe of the papers read during the meeting. Among those which must be mentioned, however, Dr. Crombie's Address on the fevers of India from the point of view of the amœba of Laveran; Dr. Harvey's moderate but telling reply to the anti-vivisectors who have within the last few months begun to make themselves objectionable in this country; Dr. Moorhead's paper on cerebro-spinal fever; and Dr. L. T. Young's on the Carlsbad treatment of malarial cachexia; excited considerable interest and discussion. The undoubted existence of true typhus fever in the Punjâb was proved by several papers. Diabetes, a common disease among the better class natives of this country, was the subject of three papers. Among parasitic diseases the question of prevalence of ankylostomiasis in Assam, Madras, and Ceylon came in for much attention, and much good has been done in clearing up some points on this subject. Its non-identity with bèri-bèri, which you in Dublin have had so recent an opportunity of studying, was again demonstrated. Bèri-bèri, indeed, is far from common in India, though I saw four cases within the last few weeks. This name should be abolished altogether, and endemic neuritis or some such title adopted.

Two whole days were devoted to cholera, to which Mons. Haffkine, Mr. Hankin of Agra, Dr. W. J. Simpson, and many others contributed.

The Surgical Section was well supported. Dr. Lawrie, of Hyderabad, in his opening Address dealt with the influence of four great surgeons—Pott, Syme, Simpson, and Lister—and reiterated his belief in the results of the Hyderabad Chloroform Commission. Regarding this point one remark may be made—that is, that there must be something racial or climatic to account for the wonderful safety of chloroform in India as compared with European countries. Every surgeon who has practised in India knows that he operates every year on a couple of hundred cases in which the chloroform is administered by a so-called "dresser," often little better than a coolie, on the pay of 8 rupees per month! Yet we never have had bad results in India, though fatal accidents freely occur in Europe where chloroform is administered by highly-trained specialists. How is this to be explained?

The subject of cataract evoked a lively discussion. The opinion of the majority of speakers, many of whom have done hundreds of cataracts every year—one man stated he had done twenty-five in one day—was that an iridectomy was unnecessary except in special cases (adhesions of iris, &c.); others—and the present writer among the number—prefer to stick literally and carefully to the steps of the operation as laid down by Mr. Swanzy.

A very interesting investigation into the diffusion of vesical calculus formed the subject of a paper by Dr. A. E. Roberts. Its prevalence among wheat-eating populations, and its almost entire absence among the rice-eating people, was investigated from a chemical point of view, which cannot here be discussed. Several papers on cranial and brain surgery evoked much discussion.

In the Section of Public Health, cholera, vaccination, malaria, the necessity of a more completely organised sanitary service, were among the subjects brought forward.

There can be no doubt that good will come of the Congress. It is not impossible that one of the first results of the meeting, and of the resolutions passed by it, will be that less money will be spent upon giving a veneer of higher education to thousands of natives with the almost sole result of making them discontented; and a good deal more upon sanitation, and other life-saving measures. The next meeting will be held in Bombay, in 1898.

[Among the graduates of the Irish Schools who took part in the Congress were Surgeon-Major Adams, Surgeon-Major Cunningham, Surgeon-Major L. T. Young, Surgeon-Captain Grainger, Surgeon-Captain A. Buchanan, Surgeon-Captain W. J. Buchanan, and Surgeon-Captain Malcolm Moore.]

The following remarks of Mr. Ernest Hart on the Cantonments Act Amendment Bill are reprinted at length :—

"There is another subject of great importance to our profession to which I should like briefly to draw your attention. You are aware that there is now before the Legislative Council of the Government of India a Bill called the Cantonments Act Amendment Bill. From 'the statement of objects and reasons' for the introduction of this measure, I gather that it has been introduced in compliance with direct instructions received from her Majesty's Secretary of State for India for the purpose of prohibiting, under penalties, the examination of prostitutes in cantonments. From the discussion which took place in Council on the introduction of this measure it would appear that the Bill was suggested by a Commission appointed to enquire into the working of the Cantonment Act, more especially those portions of it which deal with the control and examination of prostitutes. It is interesting to note, in

passing, that this measure, which is certain to arouse the greatest opposition both in this country and in England, was carried in a Commission consisting of five persons, by the votes of three members as against two who opposed it. That such a proposal should have been accepted by the Government in England, and should have been forced on the Government of India, against the unanimous opinion of those best able to advise on the subject, must be to all of us a matter of extreme regret.

"It is not necessary for me here to refer to the large and important subject of the prevention of disease in the army. The question must be fought out in Parliamentary constituencies at home, and the British voter must be educated to appreciate the enormous loss of military efficiency, and the great cost to the country that must result when the most elementary precautions are neglected. The constituencies must be made to feel that, for a paltry and misapplied sentiment, the Government of England is subjecting thousands upon thousands of its subjects to disease and an early grave; and, through the discharged soldier who returns to civil life, destroying the health and happiness of generations of innocent women and children.

"Until such time as a change of sentiment has been effected in the British public in regard to this subject, we professional men must be content to assist in educating the public to a proper appreciation of this question. For the present, the duty of the Government of India, and of the officers serving under it, is plain—the policy now ordered must be carried out.

"As far as my knowledge goes, the Government of India has unreservedly accepted this position, and is loyally endeavouring to carry out this policy. What then is the object of such a Bill as this? and what are the motives of those who have pressed for its introduction? It is a hard thing to say, but a consideration of the provisions of the proposed Act can leave no doubt in the mind of any unprejudiced person that it is meant to humiliate the Government of this great Empire for some supposed neglect in the past, and at the same time to cast a slur on our profession by menacing those of our brethren who happen to be in the service of Government with criminal prosecution.

"A very brief consideration of the Bill will show that I have not overstated the case. The Bill consists of three clauses, the second and third of which only are of any consequence.

"The 2nd clause expressly prohibits the Government of India from making any rules on this subject. But we already know that the Government has solemnly declared that it will make no such rules. Can there be any doubt as to the slight and indignity that it is proposed to place on this Government through an act of its own Legislature? This part of the Bill, however, does not concern us, and we may safely leave it to be dealt with by the general public, who, to judge from the agitation on

the cotton duties, have become extremely sensitive as to the position that the Government of India now occupies in regard to the carrying out of orders which do not commend themselves to the judgment of those responsible for the government of this country.

"What we, as medical men, are most concerned with in the Bill is the third and last clause, which prohibits, under the penalty of a fine, the compulsory examination by a public servant of any woman. Can anybody reading this clause doubt for a moment that we have here penal legislation aimed at our professional brethren who happen to be in Government service? It insinuates that no trust can be placed in these gentlemen to carry out loyally and promptly the orders of Government on this subject, and that they must be compelled to do their duty by threats of criminal prosecution. Surely, it is a new principle in legislation that the failure to carry out an executive order should render an officer liable to prosecution for a criminal offence. I have already pointed out that there is no possible object for enacting the second clause, and I will now show that, except for the gratuitous menace to the medical profession, there can be no object for the third and last clause of this Bill. It is impossible to suppose that the persons who are insisting on this legislation are unaware of the fact that, under the existing law, the compulsory examination of a woman by any person is an offence under Section 354 of the Penal Code, and, as such, punishable with imprisonment for two years.

"If every woman in India is already protected by the existing law, what possible object can this proposed legislation have except to render medical officers liable to criminal prosecution on the evidence of abandoned women? This dangerous position for medical men in India is aggravated by the fact that it is possible to obtain any amount of false evidence at a small cost to sustain false charges brought for the purpose of levying blackmail.

"But this last clause will have an effect on these wretched women themselves which, it is hoped in the cause of humanity, the framers of the Bill did not mean to inflict on them. We who are called upon to prescribe for these diseases know that the treatment, if it is to be successful, must include a careful physical examination, not only at the commencement of the treatment, but during its progress.

"What will be the future relative positions of the medical officer and his patient if this Bill passes into law? His duty requires him to do the best he can for his patient; but is it reasonable to expect that he should do it at the risk of a criminal prosecution, and, possibly, professional ruin? Is it right to deprive even an abandoned woman of the best possible means of alleviating her sufferings by making it dangerous for her professional adviser to ascertain what she is suffering from?

"I feel certain that this Congress will not allow this Bill to pass into

law without a respectful protest against it. Speaking for the profession at home, I feel that it is only necessary to bring this subject to the notice of our brethren in England to obtain their co-operation in asking the Secretary of State to reconsider the position which the Government has taken up in this matter."

The matter was the subject of a special resolution sent up to Government, proposed and passed by the unofficial members of the Congress, as a protest against the insult implied to the Government Medical Officer.

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### BRITISH MEDICAL SERVICE.

THE following is the official list of Surgeons on Probation of the Medical Staff of the British Army who were successful at both the London and Netley Examinations. The prizes are awarded for marks gained in the special subjects taught at the Army Medical School. The final positions of these gentlemen are determined by the marks gained in London added to those gained at Netley, and the combined numbers are accordingly shown in the list which follows :—

January 31st, 1895.

| | Combined Marks. | | Combined Marks. |
|---|---|---|---|
| [a] 1 Harrison, W. S. - | 5,052 | 7 Staddon, H. E. - | 3,983 |
| 2 Howell, H. A. L. - | 4,931 | 8 Whitehead, J. H. - | 3,877 |
| [b] 3 Lawson, D. - - | 4,356 | 9 Murison, J. A. - | 3,837 |
| 4 Steel, E. B. - - | 4,316 | 10 Tomlinson, L. P. - | 3,746 |
| 5 Profeit, C. W. - - | 4,261 | 11 Perry, S. J. C. P. - | 3,614 |
| 6 Kiddle, F. - - | 4,183 | 12 Heaton, A. F. - | 3,552 |

### HYPNOTIC SUGGESTION IN UNCONTROLLABLE VOMITING.

DR. JAMIESON reports a case in the *Australasian Medical Gazette*, in which Mr. J. M. Creed successfully applied hypnotic suggestion in the treatment of a case of uncontrollable vomiting in pregnancy. The patient, aged 22, in the eighth month of her third pregnancy, gave birth to a child which had been dead for some time. Persistent vomiting from which she had been suffering previously continued, and resisted all the usual remedies. After partial hypnotisation by Mr. Creed, she felt better and did not vomit for three days. Suggestion was then repeated, with uninterrupted success; except that, on the twelfth day from the first hypnosis she vomited for about three hours. This attack was overcome by hypnosis, and subsequent recovery was continuous.

[a] Gained the de Chaumont Prize in Hygiene, and the Martin Memorial Medal.
[b] Gained the Montefiore Second Prize in Surgery.

# ROYAL ACADEMY OF MEDICINE IN IRELAND.

President—James Little. M.D., F.R.C.P.I.

General Secretary—W. Thomson, F.R.C.S.I.

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## SECTION OF OBSTETRICS.

President—Dr. R. D. Purefoy.

Sectional Secretary—Dr. F. W. Kidd.

*Friday, November 23, 1894.*

*Specimens exhibited.*

Dr. W. J. Smyly exhibited the following specimens:—8 ovarian cysts, including 2 dermoids; 2 specimens of interstitial salpingitis; 4 specimens of double pyosalpinx; 1 fibro-cystic tumour of the uterus; 2 fibro-myomata (one suppurating), removed from the same patient by abdominal section; 6 uteri, in which the entire organ, including the cervix, had been removed by abdominal section (Martin's method); 1 uterus, removed by abdominal hysterectomy, with intra-peritoneal treatment of stump; 4 myomatous uteri removed per vaginam by Doyen's method (morcellement). The fragments of the largest specimen weighed 4 lbs. 12 ozs., and of the smallest $1\frac{3}{4}$ lbs. The operation in the latter case was necessitated by cancer of the mucous membrane; 4 specimens of cancerous uteri removed per vaginam; 1 suppurating kidney. In this case the tumour was of enormous size, and a diagnosis was not possible until the hilum of the kidney was reached.

The only death was after the removal of a myomatous uterus with intra-peritoneal treatment of the stump; but the cause of death being shock, the method of dealing with the stump could not be blamed for the result.

He also showed a six months' fœtus removed from a case of secondary abdominal pregnancy. The sac consisted of the fœtal membranes, and was soft and friable. The intestines were firmly adherent to it, and considerable difficulty was found in separating the adhesions. The patient died on the third day from asthenia. On *post-mortem* examination the abdominal cavity appeared healthy.

*A Specimen of Ruptured Uterus.*

The patient was admitted to the Rotunda Hospital 20 hours after the rupture had taken place. Dr. Murphy, the clinical clerk, having been

called to the case, found the uterus ruptured and fœtus and placenta in the abdominal cavity. Having delivered both *per vias naturales*, and plugged the rent and vagina with iodoform gauze, the patient was conveyed to the hospital. Dr. Smyly saw her about midnight; she was then in a very exsanguine condition, but no blood was escaping externally. He therefore determined to wait and employ restoratives, but at the end of an hour, it being evident that she was losing ground, he opened the abdomen, which was found full of blood. The uterus, which was well contracted, was torn across the anterior aspect of the lower segment and completely separated from the bladder. The rent extended into the vagina. The uterus having been drawn out of the abdominal cavity, it was found impossible to apply the serre nœud sufficiently low to control the hæmorrhage; the entire organ was therefore removed, the rent in the vagina sutured, all the ligatures drawn down through the vagina, and the peritoneal cavity closed above them with fine catgut sutures. The patient, however, died of sepsis on the fourth day, and had probably been infected before admission.

### *Cæsarean Section.*

Dr. Smyly also showed the uterus of a patient who had died after Cæsarean section. It was the second operation upon the same patient. The operation had to be commenced just when daylight was fading and was finished by lamplight. After opening the abdomen and drawing out the uterus the intestines were found firmly adherent to the old cicatrix, and were detached with some difficulty. The line of union was so thin that it gave way to pressure with the thumb; the fœtus was rapidly extracted, cried immediately, and is still alive and well. The sides of the uterine incision were split with scissors, as the cicatricial margins did not offer sufficient raw surface to insure firm union, and united with alternate superficial and deep sutures. The uterus contracted well, and there was no *post-partum* hæmorrhage. The intestines were carefully examined and appeared to have been uninjured. Next day symptoms of peritonitis set in, and the abdomen began to swell. A stitch having been removed and a drainage-tube inserted, a large quantity of serous fluid escaped. She died on the morning of the fourth day. At the *post-mortem* examination a small opening was found in the intestine, and the fact that it was not discovered at the operation was due to the imperfect light.

### *Further Exhibition of Specimens.*

Dr. Alfred Smith showed—(1) a pair of non-cystic pyosalpinges which he removed from a married woman aged twenty-eight. The patient had suffered from a severe attack of puerperal fever, and was an invalid since the birth of her child four years ago. There was constant

abdominal pain, referred to both inguinal regions, and profuse menstruation, accompanied by great pain. Patient made a good recovery.

(2) A large unilocular ovarian tumour, which caused some difficulty in removing on account of very extensive adhesions. On breaking them through they bled considerably; a gauze sponge wrung out of hot water arrested the hæmorrhage. A drainage-tube was considered necessary, as the weeping from the freshened surface was rather heavy. The amount of discharge from drainage-tube was great, requiring to be dressed every hour. The drainage-tube was rotated on each occasion to prevent adhesions; this was not successful, as on the removal of the tube on the 4th day a loop of intestines was found firmly anchored to the tube by a long firm adhesion, which had coiled round and round the tube. On withdrawing the tube the loop of intestine came out through the abdominal wound. An attempt was made to break down the adhesion from the inside of the tube by curetting without result; neither could the adhesion be broken down by breaking it off with a gauge pad. The adhesion had to be ligatured and cut; in doing so, unfortunately, the intestine was opened and some fæces escaped, fouling the parts. This was carefully mopped up, a purse-string suture put in, also a Lembert's. The surface of the wound was anointed by sterilised oil after Martin's method and returned. The patient made a splendid recovery; no reaction followed.

(3) A large dermoid cyst with extensive adhesions. Numerous calcified plates were in the wall of the cyst; these, when palpating the tumour before the operation, produced a sound like that of breaking egg-shells; it was certainly very remarkable and somewhat obscured the diagnosis. Very little fluid in the tumour, which was the size of a sixth-month pregnant uterus, the contents being sebaceous, putty-like material, which dissolved in ether. On plunging the trocar to empty the cyst the lumen of the tube, a large Spencer Wells', was blocked with this putty material, and none of the contents of the tumour escaped, and gave the sensation of plunging into a soft œdematous myoma. On withdrawing trocar the characteristic dermoid fluid escaped, establishing the diagnosis. The tumour rotated and discharged a great quantity of its contents into the peritoneal cavity. This accident caused anxiety on account of the rise in temperature of the patient before operation. However, the abdominal cavity was well douched out with gallons of normal saline solution, (temp. 100° F.) with a three-foot pressure—also drainage. The recovery was rapid and uneventful.

(4) A hydrosalpinx removed from a patient, aged twenty-nine, who had puerperal fever after her first child six years ago. The history, the symptoms, and the bi-manual examination pointed to a cystic pyosalpinx, but the abdominal section revealed a fine specimen of hydrosalpinx. Recovery good.

(5) A pair of large phosphatic vesical calculi, removed from a farmer's wife, aged 40. An attempt was made to remove them through the urethra, but failed; a section was made through the vesico-vaginal wall, and the calculi were easily picked out with the finger. The larger stone, the size of a large walnut, was found growing like a barnacle on the base of the posterior wall of the bladder. The patient was able to leave hospital twelve days after operation.

Dr. Purefoy wished to know what had led to the formation of the calculi? Also in the case of hydrosalpinx, when it was ascertained that it was a case of hydrosalpinx, whether Dr. Smith had not thought of retaining instead of removing it?

Dr. Potter asked why the calculi had not been crushed instead of removing them through a vesico-vaginal fistula?

Dr. Smith, replying, said that there was no evident cause for the formation of the calculi. The woman from whom he had removed them was a farmer's wife. She had the usual history of sudden stoppage while passing water, and of being able to pass more on altering her position. Considering the short time (in this case 10 days) that the vesico-vaginal fistula took to heal, he preferred removing it that way instead of crushing.

With regard to the hydrosalpinx. He considered it was useless owing to the puckering due to adhesions, and so had removed it, especially as the tube on the opposite side was all right.

*An Encapsulated Tumour Removed from the Vaginal Wall.*

Dr. Atthill exhibited an encapsulated tumour removed from the vaginal wall. He said:—

In March, 1893, the patient from whom this tumour was removed came under my care. She was a young unmarried lady, and consulted me in consequence of a feeling of discomfort at the orifice of the vagina.

I found an elastic tumour, oblong in shape, lying a little to the right of the urethra, which it slightly displaced; it was nearly two-thirds of an inch in length, and extended backwards from a little to the inside of the urethra. It had an elastic feel and was painless.

I deemed it better to temporise and watch its progress. In six weeks I saw the lady again, the tumour is little altered except that a sulcus could be traced all round the base, and I came to the conclusion that it was an encysted tumour and that it would most probably have to be removed.

I did not see the lady till two months ago, when the increased size of the tumour made her willing to undergo an operation. Acting on the opinion that it was probably encysted, I made an incision down its centre, and came at once on the capsule. This was peeled off from the tumour with the nail and handle of knife. The only part that gave trouble was at

the point nearest to the orifice of the urethra, but I had to work carefully and quite deeply, but finally shelled the tumour out quite perfectly. There was some venous hæmorrhage subsequently, which was easily restrained by a plug.

Cystic tumours are met with commonly enough in the vagina, but an encapsulated solid tumour I have not previously seen, or indeed read of.

*Specimens exhibited by* Dr. More Madden:—

1. A Case of Molar Pregnancy;
2. Broad Ligament Cystic Tumour; and
3. Ovarian Tumour.

*Reported by* Mr. Dempsey.

*Molar Pregnancy.*—Mrs. C. H., aged thirty-five, was admitted to the Mater Hospital suffering from chronic nephritis, for which complaint she was being treated, when symptoms referable to uterine trouble appeared, and the patient was placed under Dr. More Madden's care. The following were her symptoms:—The patient had missed four of her menstrual periods and believed herself pregnant. Bloody discharges however followed the cessation of the menses. Physical examination showed all the early signs of pregnancy except that the abdomen was over-distended for the time, and that no movements or parts of a fœtus could be discerned. Accordingly, a vaginal examination was made, when no ballottement was apparent or parts of a fœtus discernible, and accordingly Dr. More Madden diagnosticated a hydatidiform mole. He therefore determined to dilate the cervix, and remove the mass. This was done and the uterus plugged with iodoform gauze. A few days after he found some more of the mass present which was similarly removed. After operation the patient had a temperature of 103° F. and was much collapsed for some days, her temperature finally reaching 105·2° on the day of her death. The cause of death may be attributed to the chronic nephritis having so debilitated the patient that she succumbed to the effects of the operation.

*Cystic Tumour—Broad Ligament.*—B. C., single, aged twenty-eight, was admitted under Dr. More Madden's care, on October 18th. She complained of severe pain in the right hypochondrium, which was tender on pressure. The pain had been growing in intensity and was now very acute. There was severe vomiting. Menstruation normal in every respect. Dulness on percussion, with deep-seated fluctuation. Laparotomy was performed, and the cyst brought into view. Having done so it was drained with a Spencer Wells' trocar and cannula and removed, no adhesions being present. The broad ligament was doubly ligatured, and abdomen thoroughly washed out with a warm boracic solution. The wound was sutured with four silver wire sutures, including

peritoneum, muscle, and superficial parts. The skin was brought together by a number of silkworm gut sutures. All the sutures were removed on the tenth day after operation, the wound having healed by first intention. The patient's temperature never exceeded 100°, her recovery being uninterrupted and rapid.

*A Case of Ovariotomy.*—N. R., aged sixteen, farmer's daughter; began to menstruate at fourteen, continued regular until six months before admission, when enlargement of abdomen and failure of general health, leading to suspicion of being pregnant. Medical examination was resorted to and a tumour was diagnosticated. Admitted to the Mater Hospital on 12th of September, 1894. On the following day operation was performed, the tumour being successfully removed. Ten days afterwards the stitches were removed, and the patient left hospital.

Professor M'Weeney had prepared several sections showing the microscopic appearance of an ovarian tumour removed by Dr. More Madden. The wall of the tumour showed numerous papillomata, covered with high columnar epithelium, while the subjacent connective tissue was to a great extent in a state of mucoid degeneration.

*Amputation in Utero.*

Dr. F. W. Kidd exhibited a specimen showing the process of amputation "in utero," by amniotic bands. Specimen was a fœtus of about 4 months—had come away before patient came into Coombe Hospital, and had been roughly treated, having its head almost separated from its body. Adhesive bands had amputated portions of fingers on both hands, and extending to the feet had amputated some of the toes and one band was amputating one of the lower limbs, midway between the knee and ankle. Fœtus also had double hare lip. The specimen was interesting on account of its rarity.

The President delivered a short Inaugural Address. He reviewed the work done by the members of the Section during the previous Session, and touched on the improvements in the treatment of and operations on the different organs usually treated by the gynæcologist and obstetrician.

Dr. W. J. Smyly read his "Clinical Report of the Rotunda Lying-in Hospital, for the year ending October 31st, 1893."

Owing to the lateness of the hour Dr. Macan proposed that the discussion on the Rotunda Hospital Report be postponed till the next meeting, which was agreed to.

## SANITARY AND METEOROLOGICAL NOTES.

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### Vital Statistics

*For four Weeks ending Saturday, January* 26, 1895.

The deaths registered in each of the four weeks in the sixteen principal Town Districts of Ireland, alphabetically arranged, corresponded to the following annual rates per 1,000 :—

| Towns | Weeks ending | | | | Towns | Weeks ending | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Jan. 5. | Jan. 12. | Jan. 19. | Jan. 26. | | Jan. 5. | Jan. 12. | Jan. 19. | Jan. 26. |
| Armagh - | 21·0 | 21·0 | 49·1 | 49·1 | Limerick - | 16·8 | 14·0 | 30·9 | 32·3 |
| Belfast - | 23·9 | 20·0 | 30·9 | 26·7 | Lisburn - | 21·3 | 8·5 | 21·3 | 46·8 |
| Cork - | 26·3 | 24·2 | 36·7 | 29·8 | Londonderry | 17·3 | 11·0 | 34·6 | 23·6 |
| Drogheda | 17·6 | 4·4 | 17·6 | 22·0 | Lurgan - | 22·8 | 13·7 | 45·6 | 59·3 |
| Dublin - | 27·3 | 30·1 | 39·2 | 30·6 | Newry - | 24·1 | 36·2 | 32·2 | 32·2 |
| Dundalk - | 25·1 | 58·6 | 12·6 | 37·7 | Sligo - | 35·5 | 25·4 | 0·0 | 20·3 |
| Galway - | 26·4 | 34·0 | 41·5 | 41·5 | Waterford - | 22·5 | 17·5 | 27·5 | 25·0 |
| Kilkenny | 4·7 | 18·9 | 23·6 | 18·9 | Wexford - | 22·6 | 45·2 | 27·1 | 31·6 |

In the week ending Saturday, January 5, 1895, the mortality in thirty-three large English towns, including London (in which the rate was 17·4), was equal to an average annual death-rate of 18·9 per 1,000 persons living. The average rate for eight principal towns of Scotland was 21·8 per 1,000. In Glasgow the rate was 24·6, and in Edinburgh it was 20·3.

The average annual death-rate represented by the deaths registered during the week in the sixteen principal town districts of Ireland was 24·6 per 1,000 of the population.

The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 1·7 per 1,000, the rates varying from 0·0 in seven of the districts to 9·1 in Lurgan—the 5 deaths from all causes registered in that district comprising 2 from whooping-cough. Among

the 125 deaths from all causes registered in Belfast are 1 from measles, 2 from scarlatina, 2 from whooping-cough, and 3 from diarrhœa. The 38 deaths in Cork comprise 3 from whooping-cough and 1 from enteric fever. The 12 deaths in Limerick comprise 1 from scarlatina and 1 from whooping-cough.

In the Dublin Registration District the registered births amounted to 201—95 boys and 106 girls; and the registered deaths to 190—95 males and 95 females.

The deaths, which are 30 under the average number for the corresponding week of the last ten years, represent an annual rate of mortality of 28·3 in every 1,000 of the population, or 4·5 under the mean rate for the first week of the ten years 1885–1894. Omitting the deaths (numbering 7) of persons admitted into public institutions from localities outside the district, the rate was 27·3 per 1,000.

The number of deaths from zymotic diseases registered was 17, being 10 under the number for the preceding week, and 6 below the average for the first week of the last ten years. The 17 deaths comprised 5 from small-pox, 2 from influenza and its complications, 1 from whooping-cough, 2 from enteric fever, 2 from diarrhœa, and 2 from erysipelas. Of the 5 persons who died from small-pox, 2 (aged respectively 29 and 50 years) had been vaccinated and 3 (aged respectively 5 weeks, 12 years, and 16 years) were unvaccinated.

Seventy-one cases of small-pox were admitted to hospital, being 39 in excess of the admissions for the preceding week, but 42 under the number for the week ended December 22nd. Twenty-six small-pox patients were discharged, 16 died, and 170 remained under treatment on Saturday, being 29 over the number in hospital at the close of the preceding week. This number is exclusive of 121 convalescent patients in the South Dublin Union Small-pox Hospital, Kilmainham.

The number of cases of enteric fever admitted to hospital was 9, being 2 under the number for the preceding week: 14 enteric fever patients were discharged, 1 died, and 61 remained under treatment on Saturday, being 6 under the number in hospital on Saturday, December 29.

The hospital admissions for the week included, also, 26 cases of scarlatina, being 19 over the number for the preceding week, and equal to the admissions in the week ended December 22. Ninety-seven cases of this disease remained under treatment in hospital on Saturday, against 79 at the close of the preceding week.

The number of deaths from diseases of the respiratory system registered was 48, being 11 over the number for the preceding week, but 12 under the average for the first week of the last ten years. The deaths comprised 31 from bronchitis, 13 from pneumonia or inflammation of the lungs, and 2 from pleurisy.

In the week ending Saturday, January 12, the mortality in thirty-three large English towns, including London (in which the rate was 19·3), was equal to an average annual death-rate of 20·1 per 1,000 persons living. The average rate for eight principal towns of Scotland was 25·5 per 1,000. In Glasgow the rate was 28·7, and in Edinburgh it was 24·3.

The average annual death-rate in the sixteen principal town districts of Ireland was 24·6 per 1,000 of the population.

The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 2·0 per 1,000, the rates varying from 0·0 in ten of the districts to 9·1 in Lurgan—the 3 deaths from all causes registered in that district comprising 1 from measles and 1 from scarlatina. Among the 105 deaths from all causes registered in Belfast are 4 from whooping-cough, 1 from diphtheria, 1 from simple continued fever, 2 from enteric fever, and 1 from diarrhœa. The 35 deaths in Cork comprise 1 from whooping-cough, and 1 from diarrhœa. The 10 deaths in Limerick comprise 1 from scarlatina and 1 from whooping-cough.

In the Dublin Registration District the registered births amounted to 201—93 boys and 108 girls; and the registered deaths to 208—104 males and 104 females.

The deaths, which are 41 under the average number for the corresponding week of the last ten years, represent an annual rate of mortality of 31·0 in every 1,000 of the population. Omitting the deaths (numbering 6) of persons admitted into public institutions from localities outside the district, the rate was 30·1 per 1,000. During the first two weeks of the current year the death-rate averaged 29·7, and was 5·3 under the mean rate in the corresponding period of the ten years 1885–1894.

The number of deaths from zymotic diseases registered was 27, being 10 over the number for the preceding week, but 2 below the average for the second week of the last ten years. The 27 deaths comprise 11 from small-pox, 2 from scarlet fever (scarlatina), 1 from influenza, 2 from whooping-cough, 1 from ill-defined fever, 2 from enteric fever, 1 from diarrhœa, and 2 from erysipelas. Of the persons who died from small-pox 5 (aged respectively 10, 21, 40, 42, and 64 years) had been vaccinated and 6 (aged respectively 1, 3, 4, 9, 9, and 13 years) were unvaccinated.

Eighty-eight cases of small-pox were admitted to hospital, being 17 in excess of the admissions for the preceding week: 53 small-pox patients were discharged, 11 died, and 194 remained under treatment on Saturday, being 24 over the number in hospital at the close of the preceding week: This number is exclusive of 151 convalescent patients in the South Dublin Union Small-pox Hospital, Kilmainham.

The number of cases of enteric fever admitted to hospital was 5, being 4 under the admissions in the preceding week and 6 under those in the

week ended December 29th, 1894. Nine enteric fever patients were discharged, 1 died, and 56 remained under treatment on Saturday, being 5 under the number in hospital on Saturday, January 5th.

The hospital admissions for the week included, also, 7 cases of scarlatina, a number showing a decline of 19 as compared with the admissions of cases of that disease during the preceding week. Ninety-eight cases of the disease remained under treatment on Saturday, being 1 over the number in hospital at the close of the preceding week.

The number of deaths from diseases of the respiratory system registered was 57, being 9 over the number for the preceding week, but 15 below the average for the second week of the last ten years. The 57 deaths comprised 38 from bronchitis and 14 from pneumonia or inflammation of the lungs.

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In the week ending Saturday, January 19, the mortality in thirty-three large English towns, including London (in which the rate was 20·0), was equal to an average annual death-rate of 21·7 per 1,000 persons living. The average rate for eight principal towns of Scotland was 28·3 per 1,000. In Glasgow the rate was 31·0, and in Edinburgh it was 28·9.

The average annual death-rate represented by the deaths registered in the sixteen principal town districts of Ireland was 34·1 per 1,000 of the population.

The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 2·8 per 1,000, the rates varying from 0·0 in ten of the districts to 31·9 in Lurgan—the 10 deaths from all causes registered in that district comprising 4 from measles and 3 from whooping-cough. Among the 162 deaths from all causes registered in Belfast are 1 from whooping-cough, 3 from diphtheria, 4 from enteric fever, and 3 from diarrhœa. The 53 deaths in Cork comprise 6 from whooping-cough. The 22 deaths in Londonderry comprise 1 from enteric fever and 1 from diarrhœa.

In the Dublin Registration District the registered births amounted to 210—114 boys and 96 girls; and the registered deaths to 274—128 males and 146 females.

The deaths, which are 32 over the average number for the corresponding week of the last ten years, represent an annual rate of mortality of 40·9 in every 1,000 of the population. Omitting the deaths (numbering 11) of persons admitted into public institutions from localities outside the district, the rate was 39·2 per 1,000. During the first three weeks of the current year the death-rate averaged 33·4, and was 1·9 under the mean rate in the corresponding period of the ten years, 1885–1894.

Thirty-three deaths from zymotic diseases were registered, being 4 above the average for the corresponding week, and 6 over the number in the week ended January 12. They comprise 10 from small-pox, 1 from

scarlet fever (scarlatina), 5 from influenza and its complications, 4 from whooping-cough, 2 from simple continued and ill-defined fever, 2 from enteric fever, 3 from diarrhœa, 1 from dysentery and 1 from erysipelas. Of the 10 persons who died from small-pox, 5 (aged respectively 9 days and 24, 24, 38, and 55 years) had been vaccinated; 4 (aged respectively 36, 40, 45, and 50 years) were unvaccinated, and, as regards the remaining case, the return contained no statement as to vaccination.

The number of cases of small-pox admitted to hospital was 61, being a decline of 27 as compared with the admissions in the preceding week, and 10 under the number for the week ended January 5. Sixty-two small-pox patients were discharged, 7 died, and 186 remained under treatment on Saturday, being 8 under the number in hospital on that day week. This number is exclusive of 134 convalescents in the South Dublin Union Small-pox Hospital, Kilmainham.

Eight cases of enteric fever were admitted to hospital, being 3 over the admissions in the preceding week, but 1 under the number in the week ended January 5. Ten patients were discharged, and 54 remained under treatment on Saturday, being 2 under the number in hospital at the close of the preceding week.

The hospital admissions included, also, 7 cases of scarlatina, being equal to the number of cases of that disease admitted during the preceding week, but 19 under the admissions in the week ended January 5. Eighty-six cases of the disease remained under treatment on Saturday, being 12 under the number in hospital on that day week.

Deaths from diseases of the respiratory system, which had risen from 48 in the week ended January 5 to 57 in the following week, further rose to 69, but this number is 3 under the average for the corresponding week of the last ten years. The 69 deaths comprised 52 from bronchitis, 11 from pneumonia or inflammation of the lungs, and 2 from croup.

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In the week ending Saturday, January 26, the mortality in thirty-three large English towns, including London (in which the rate was 17·6), was equal to an average annual death-rate of 18·7 per 1,000 persons living. The average rate for eight principal towns of Scotland was 24·2 per 1,000. In Glasgow the rate was 27·3, and in Edinburgh it was 22·1

The average annual death-rate in the sixteen principal town districts of Ireland was 29·7 per 1,000 of the population.

The deaths from the principal zymotic diseases registered in the sixteen districts were equal to an annual rate of 2·7 per 1,000, the rates varying from 0·0 in eight of the districts to 27·4 in Lurgan—the 13 deaths from all causes registered in that district comprising 1 more from measles, 4 from whooping-cough, and 1 from diarrhœa. Among the 140 deaths from all causes registered in Belfast are 4 from measles, 3 from whooping-cough, 1 from diphtheria, 2 from enteric fever, and 2 from diarrhœa.

The 43 deaths in Cork comprise 4 from whooping-cough, and the 7 deaths in Wexford comprise 2 from scarlatina. The Registrar for the last-named district remarks:—"The deaths from scarlatina occurred several weeks ago: I have two cases of the disease under my own care, which are the only ones of which I am cognisant."

In the Dublin Registration District the registered births amounted to 212—108 boys and 104 girls; and the registered deaths to 208—117 males and 91 females.

The deaths, which are 22 under the average number for the corresponding week of the last ten years, represent an annual rate of mortality of 31·0 in every 1,000 of the population. Omitting the deaths (numbering 3) of persons admitted into public institutions from localities outside the district, the rate was 30·6 per 1,000. During the first four weeks of the current year, the death-rate averaged 32·8, and was 2·3 under the mean rate in the corresponding period of the ten years 1885–1894.

Twenty-six deaths from zymotic diseases were registered, being 1 below the average for the corresponding week of the last ten years, and 7 under the number for the previous week. They comprise 7 from small-pox, 2 from scarlet fever (scarlatina), 3 from influenza and its complications, 2 from whooping-cough, 1 from diphtheria, 5 from enteric fever, 2 from diarrhœa, and 1 from dysentery. Of the 7 persons who died from small-pox, 3 (aged respectively 5, 35, and 64 years) had been vaccinated; 2 (aged respectively 9 and 17 years) were unvaccinated, and as regards the remaining cases, the returns contained no statement as to vaccination.

The number of cases of small-pox admitted to hospital was 64, being an increase of 3 as compared with the admissions for the preceding week, but 24 under the number for the week ended January 12. Seventy-three small-pox patients were discharged, 6 died, and 171 remained under treatment on Saturday last, being 15 under the number in hospital on the previous Saturday. This number is exclusive of 147 convalescent patients in the South Dublin Union Small-pox Hospital, Kilmainham.

Since the appearance of this disease in July last the deaths from it within the Dublin Registration District registered in each week from the 21st July to the 26th January have been respectively 1, 0, 1, 1, 3, 6, 0, 1, 2, 0, 2, 4, 2, 2, 4, 1, 4, 3, 1, 3, 6, 5, 6, 10, 5, 11, 10, and 7, making a total of 101 deaths, all except three of which occurred in hospital; and the admissions to hospital during the same period have been 0, 4, 9, 26, 37, 14, 16, 16, 12, 13, 19, 8, 8, 28, 15, 28, 37, 24, 18, 37, 31, 86, 113, 32, 71, 88, 61, and 64 weekly.

Eight cases of enteric fever were admitted to hospital, being equal to the admissions for the preceding week: 11 patients were discharged, 1 died, and 50 remained under treatment on Saturday, being 4 under the number in hospital at the close of the preceding week.

The hospital admissions for the week included, also, 4 cases of scarlatina, being a decline of 3 as compared with the number of cases from that disease admitted during the preceding week. Seventy-four cases of the disease remained under treatment on Saturday, being 12 under the number in hospital on that day week.

Deaths from diseases of the respiratory system which had risen from 57 for the week ended January 12 to 69 for the following week, fell to 48, or 14 under the average for the corresponding week of the last ten years. The 48 deaths comprised 29 from bronchitis and 15 from pneumonia or inflammation of the lungs.

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## Meteorology.

*Abstract of Observations made in the City of Dublin, Lat* 53° 20′ *N., Long.* 6° 15′ *W., for the Month of January*, 1895.

| | |
|---|---|
| Mean Height of Barometer, | 29·760 inches. |
| Maximal Height of Barometer (on 30th, at 7 p.m.), | 30·630 „ |
| Minimal Height of Barometer (on 14th, at 7 30 a.m.), | 28·733 „ |
| Mean Dry-bulb Temperature, | 34·6°. |
| Mean Wet-bulb Temperature, | 33·4°. |
| Mean Dew-point Temperature, | 30·9°. |
| Mean Elastic Force (Tension) of Aqueous Vapour, | ·175 inch. |
| Mean Humidity, | 86·6 per cent. |
| Highest Temperature in Shade (on 22nd), | 44·8°. |
| Lowest Temperature in Shade (on 9th), | 16·9°. |
| Lowest Temperature on Grass (Radiation) (on 9th), | 12·0°. |
| Mean Amount of Cloud, | 64·9 per cent. |
| Rainfall (on 24 days), | 5·711 inches. |
| Greatest Daily Rainfall (on 12th), | 1·802 inches. |
| General Directions of Wind, | W., N.W., N.E. |

*Remarks.*

A very severe month, with much snow and frost alternating with frequent thaws. The wind was very variable in direction, but came generally from polar quarters—from W. to S.E. through the northerly points of the compass. The coldest January since 1881, and as regards rainfall a record month. The precipitation was chiefly in the form of snow or sleet and hail. It amounted to 5·711 inches, or considerably more than double the average rainfall for January, and 1·389 inches in excess of the rainfall for this month in 1877, which had been the record January rainfall up to the present year. The snowstorm of the 12th was in Dublin a perfect blizzard.

In Dublin the arithmetical mean temperature (35·4°) was much below

the average (41·4°); the mean dry bulb readings at 9 a.m. and 9 p.m. were 34·6°. In the thirty years ending with 1894, January was coldest in 1881 (M. T. = 33·2°), and warmest in 1875 (M. T. = 46·6°). In 1867, the M. T. was 35·7°; and in 1865 it was 37·8°. In 1871 and in 1886 the M. T. was 37·9°; in 1879 (the "cold year") it was 35·3°, In 1888 the M. T. was 42·1°; in 1889, 42·4°; in 1890, 44·5°; in 1891, 40·1°; in 1892, 38·8°; in 1893, 40·8°; and in 1894, 41·0°. As a general rule, January in Dublin is not colder, but a shade warmer, than December. This is owing to the full development in January of a winter area of low pressure over the Atlantic, to the northwestward of the British Isles, and to a resulting prevalence of S.W. winds in their vicinity. January, 1895, proved an extreme exception to this rule, the M. T. being 8·5° below that of December, 1894 (43·9°).

The mean height of the barometer was 29·760 inches, or 0·114 inch below the corrected average value for January—namely, 29·874 inches. The mercury rose to 30·630 inches at 7 p.m. of the 30th, and fell to 28·733 inches at 7 30 a.m. of the 14th. The observed range of atmospheric pressure was, therefore, as much as 1·897 inches—that is, a little less than one inch and nine-tenths.

The mean temperature deduced from daily readings of the dry bulb thermometer at 9 a.m. and 9 p.m. was 34·6°, or 8·4° below the value for December, 1894. Using the formula, *Mean Temp.* = *Min.* + (*max.* — *min.* × ·52), the M. T. becomes 35·6°, compared with a twenty-five years' average of 41·5°. The arithmetical mean of the maximal and minimal readings was 35·4°, compared with a twenty-five years' average of 41·4°. On the 22nd the thermometer in the screen rose to 44·8°—wind, W.; on the 9th the temperature fell to 16·9°—wind, W. The minimum on the grass was 12·0°, also on the 9th.

The rainfall was 5·711 inches, distributed over 24 days. The average rainfall for January in the twenty-five years, 1865–89, inclusive, was 2·200 inches, and the average number of rainy days was 17·3. The rainfall, therefore, and the rainy days were both much above the average. In 1877 the rainfall in January was very large—4·322 inches on 25 days; in 1869, also, 4·258 inches fell—on, however, only 18 days. On the other hand, in 1876, only ·406 inch was measured on but 9 days; and in 1880 the rainfall was only ·563 inch on but 8 days. In January, 1886, 3·244 inches of rain was measured on 26 days; in 1887 (the "dry year,") 1·816 inches fell on 16 days; in 1888, 1·247 inches on 9 days; in 1889, 2,213 inches on 16 days, in 1890, 2·975 inches on 21 days; in 1891, only ·672 inch on 14 days; in 1892, 1·698 inches on 20 days; in 1893, 2·239 inches on 19 days, and in 1894, 2·838 inches on 23 days.

Lunar halos were seen on the 5th and 6th. The atmosphere was foggy on the 8th, 9th, 18th, 19th, and 28th. High winds were noted on 13 days, reaching the force of a gale on 4 days—the 6th, 11th, 12th,

and 24th. Hail fell on the 2nd, 6th, 7th, 8th, 10th, 13th, 21st, 24th, 25th and 31st, and snow or sleet on the 3rd, 5th, 6th, 7th, 8th, 10th, 12th, 13th, 25th, 27th, 28th, 30th, and 31st. Temperature never exceeded 45° in the screen; while it fell to or below 32° in the screen on 18 nights, compared with 7 nights in 1894, 4 nights in 1893, 15 nights in 1892, 7 nights in 1891, 1 night in 1890, and 3 nights in 1889. The minima on the grass were 32°, or less, on 29 nights, compared with 17 nights in 1894, 16 nights in 1893, 25 nights in 1892, 21 nights in 1891, 15 nights in 1890, and 16 nights in 1889.

The record for the period ended Saturday the 5th, is one of very cold, changeable weather, fresh to strong westerly to northerly winds, alternate cloud and sunshine, rain or snow and frost. Tuesday, the 1st, was fair and frosty, but a thaw set in at night and a good deal of cold rain fell on Wednesday. In the evening squalls of heavy rain and hail passed over Dublin, and the wind (which had backed to W. or W.S.W.) began again to veer towards N. By Thursday morning a depression of some intensity had formed over the Straits of Dover and the N.E. of France. This caused cold showers, and strong northerly winds in the British Isles. In Dublin the weather on this day was very bright and dry, but heavy showers were seen to pass southwards out at sea, and thunder, lightning and hail occurred in the Scilly Islands at night. Sharp frost set in on Friday, but the approach of a new depression from N.W. brought sleet and rain on Saturday, the phenomenon of a "glazed frost" being observed in Dublin throughout the forenoon. The height of the barometer in Dublin ranged between 29·705 inches at 9 p.m. of Wednesday (wind W.N.W.) and 30·313 inches at 9 p.m. of Friday (wind, N.W.). On Wednesday the screened thermometers rose to 42·9°; on Saturday, they fell to 26·9°. The minimum on the grass on the latter day was 21·0°. Rain fell on three days to the total amount of ·318 inch, ·218 inch being measured on Wednesday. The prevailing wind was N.W. Hail fell on Wednesday; sleet, or snow, on Thursday and Saturday.

Weather of exceptional severity held throughout Western Europe all through the week ended Saturday the 12th. Until Wednesday, the barometer was highest off the W. and N.W. of Ireland, low over Great Britain and Central Europe, lowest over Italy and the Mediterranean. Hence polar winds prevailed, and there were frequent falls of snow and hail. On Tuesday snow fell in large quantities in and about Dublin at a temperature of 29°—the depth of snow on the level was 2½ inches. The sky became cloudy at night, checking radiation; but afterwards the clouds dispersed and temperature fell with great rapidity to 16·9° in the screen and 12·0° on the snow. Hard frost prevailed throughout Wednesday, cirro-cumulus clouds coming from E.S.E. and S.E., while a light westerly land breeze and much fog held all day. Atmospheric pressure now gave way in the W., so that a decided southerly air-current spread

over Ireland, with a rising thermometer, thaw, and falls of rain, sleet, and hail. At this time, the frost "stiffened" in England and remained intense in Scotland. On Friday, at 8 a.m., the thermometer read 11° at Aberdeen, 14° at York, 16° at Loughborough, 18° at Shields, and 19° at Oxford. In Dublin there was a steady thaw on this day, with a piercingly cold S.S.E. wind, which momentarily freshened, until at night it blew a fresh to strong gale. After midnight the most violent snowstorm experienced since January 18, 1881, began and raged until late on Saturday afternoon. It was renewed on Saturday night, so that no such snowfall has occurred in Dublin since 1855—the "Crimean winter." In Dublin the mean atmospheric pressure was 29·762 inches, the barometer rising to 30·053 inches at 9 p.m. of Monday (wind N.N.E.), and falling to 29·058 inches, at 9 p.m. of Saturday (wind S.E.). The corrected mean temperature was 32·6°. The mean dry bulb reading at 9 a.m. and 9 p.m. was 31·9°. On Sunday the screened thermometers rose to 41·6°, on Wednesday they fell to 16·9°. The rainfall (which consisted chiefly of snow and hail) amounted to 3·012 inches, on six days, ·847 inch being credited to Friday and 1·802 inches to Saturday. The prevailing winds were N.N.E. and S.S.E.

The record of the week ended Saturday, the 19th, is again one of cold, winterly, and generally unsettled weather. The cold was certainly not so severe as that felt in the previous week, but in Dublin especially it was intensified by a prolonged thaw during the early days of the period—in fact, masses of snow lay here and there even on Saturday, a week after the "blizzard" of the 12th. On Sunday and Monday the centre of the large and deep depression, which had caused the south-easterly gale and snowstorm, lay almost stationary over the Co. Kerry and the adjacent parts of the Atlantic. The wind remained in the S.E., except in Brittany and off the entrance to the English Channel, where it was south-westerly. Rain fell at most stations in variable amounts. In Dublin the precipitation was considerable, in consequence probably of a local chill caused by the melting snow. The depression moved southwards on Tuesday and then passed up St. George's Channel, crossing Wales and the North of England, and finally joining another depression off the North of Scotland on Thursday morning. From the time of its appearance on Friday, January 11, until it passed away on Friday, the 18th, this depression caused a rainfall of no less than 4·329 inches in the City of Dublin—this is nearly double the average January rainfall in Dublin—2·200 inches. Friday was fine and frosty, but at night the weather again became rainy, and Saturday was wet and gloomy in the extreme. In Dublin the mean atmospheric pressure was only 29·147 inches—the barometer remaining below 29 inches for as many as 98 hours—from 10 p.m. of Saturday, the 12th, until midnight of Wednesday, the 16th. The absolute minimum at this station was 28·733 inches at 7 30 a.m. of Monday (wind, S.E.).

The maximum pressure was 29·689 inches at 9 p.m. of Friday (wind, calm). The corrected mean temperature was 38·3°. The mean dry bulb reading at 9 a.m. and 9 p.m. was 37·8°. On Tuesday and again on Saturday temperature rose to 42·7° in the screen; on Friday it fell to 31·0° in the screen, and to 25·2 on the grass. The rainfall was 1·928 inches on six days, ·960 inch being registered on Wednesday. Snow and hail fell on Sunday.

The weather during the week ended Saturday, the 26th, continued winterly and inclement as in past weeks. Polar winds prevailed, and blew strongly, as barometric gradients were at times very steep. Considerable quantities of cold rain, hail, and snow fell generally, and thunder and lightning, followed by a snowstorm, were reported from London on Wednesday forenoon. At the beginning of the week a depression lay near the mouth of the English Channel, and from this position it travelled south-eastwards across France, gradually filling up and finally dispersing. This disturbance brought copious falls of rain to England and the French shores of the Channel. Temperature also rose very decidedly but transitorily over the South of England—to 52° in London and 56° at Prawle Point on Sunday. In Scotland on that day the thermometer failed to read 40°, and in Ireland the highest reading was 44° in Dublin and at Roche's Point, Cork. From Tuesday onward the barometer remained very low in the North of Europe, and more or less serious secondary depressions passed in a south-easterly direction down the North Sea or across the British Islands. At 8 a.m. of Thursday the barometer read only 28·88 inches at Wick, but 29·72 inches at Valentia (Kerry). On Friday, a rush of intensely cold, dry polar air passed southwards over the United Kingdom, and dry powdery snow fell. On the morning of this day the thermometer read —16° F. at Haparanda, on the Gulf of Bothnia. In Dublin, the mean atmospheric pressure was 29·799 inches, the barometer ranging from 30·184 inches at 9 p.m. of Monday (wind, N.N.E.) to 29·207 inches at 12.45 p.m. of Thursday (wind, W.N.W.). The corrected mean temperature was 37·0°. The mean dry bulb temperature at 9 a.m. and 9 p.m. was 35·6°. On Tuesday, the screened thermometers rose to 44·8°—the maximum of this cold month; on Saturday they fell to 26·0°. The rainfall was ·291 inch, on six days, ·111 inch being measured on Wednesday. Hail fell on Monday, Thursday, and Friday; snow on Friday. The prevalent winds were N.E. and N.W.

Frequent changes from frost to thaw, and an almost uninterrupted prevalence of winds from polar quarters made the last days of the month very trying. The striking features of the period were the intensity of the cold in all parts of Western Europe from time to time and the sudden and unusual alterations of atmospheric pressure which occurred. On Sunday and Monday a chain of shallow barometric depressions stretched

from the Arctic Circle across Norway down the North Sea and across France to the Mediterranean. Fresh northerly winds blew in Scotland and Ireland, which lay to the west of the trough of low pressure, and snow and hail fell at intervals. On Sunday evening lightning was seen in Dublin, at Prawle Point, Devon, and in Jersey. On Monday night a shallow V-shaped depression advanced over Ireland from the Atlantic, causing a thaw and rain on Tuesday. This low-pressure system soon filled up, as an anticyclone of unusual intensity formed over the South of Scandinavia, where the barometer rose to 31·0 inches at 8 a.m. of Wednesday. The barometer remaining low in the Mediterranean basin, fresh easterly gales and bitter cold prevailed until the close of the month. Throughout the period large quantities of snow or sleet and hail fell in nearly all districts. In Dublin atmospheric pressure ranged between 29·809 inches at 9 a.m. of Sunday (wind, W.N.W.) and 30·630 inches at 7 p.m. of Wednesday (wind E.) On Monday the screened thermometers fell to 23·8°; on Tuesday they rose to 42·9°. The prevalent winds were N.W., E., and N.E. The rainfall (chiefly in the form of snow, sleet, and hail) was ·162 inch on three days—·080 inch being measured on Thursday the 31st.

In Dublin the rainfall up to January 31, 1895, amounted to 5·711 inches on 24 days, compared with a twenty-five years' average (1865–1889) of 2·200 inches on 17·3 days.

At Knockdolian, Greystones, Co. Wicklow, 6·190 inches of rain fell on 19 days. The heaviest falls in 24 hours were 1·040 inches on the 12th, and ·910 inch on the 16th.

At Cloneevin, Killiney, Co. Dublin, the rainfall was 5·930 inches on 24 days, 1·470 inches being measured on the 12th. This was the highest rainfall recorded at this station in January during the past 11 years. The average fall for the preceding 10 years was 2·019 inches on 16·6 days. Snow fell on the 1st, 2nd, 6th, 7th, 12th, 25th, and 31st. In 1894, the rainfall was 3·260 inches on 23 days.

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### SUNSTROKE IN NEW YORK.

The deaths in 1890 were 62; in 1891, 95; in 1893, 43, and until July 26th of the past year, 40. In 1892, when there were 320 deaths, 29 occurred in June, 252 in July, and 39 in August. In each year two-thirds of the deaths occurred among males.—*Medical Record.*

### MISUSE OF THE MAILS.

A few days ago one Hunter, an electric-pad-device man, was sentenced to the Penitentiary by the United States Court of Cincinnati for a misuse of the United States mail, on the ground that his scheme was to defraud the people by selling a useless device.—*Medical Record.*

# PERISCOPE.

## INDIAN MEDICAL CONGRESS.

The Indian Medical Congress, which was opened by his Excellency the Viceroy of India, was held during the Christmas week, extending from the 24th to the 29th of December, 1894. All the Congress proceedings were conducted in St. Xavier's College, which was most generously lent to the members of the Congress by the Fathers of the College. This institution was admirably adapted for the purposes of the Congress. It has a large hall which accommodates 500 people; class-rooms which are very suitable for the sectional meetings; verandahs and rooms available for the exhibition of medicines, instruments, filters, wells, and sanitary appliances; a lawn for the establishment of a field hospital, one wing of which was kindly lent by the Government for exhibition; and lastly, there are extensive grounds on which shamianahs and tents were put up for refreshments and the social comforts of the visitors. St. Xavier's is well situated for an assembly such as that which gathered together on the 24th of December and the ensuing days of the Christmas week. It is centrally situated, and taps by tramways both Northern and Southern Calcutta, and is accordingly easy of access. Arrangements, we believe, were made with tramways to secure special accommodation for visitors to and from the Congress. The President's Address was delivered in the large hall of St. Xavier's College immediately after the Congress was opened by the Viceroy. The opening ceremony over, an adjournment was made for luncheon, and in the afternoon the Addresses in Medicine, Surgery, and Obstetrics were delivered by the Presidents in their respective sectional rooms. Tuesday being Christmas Day no work was done by the Congress. On Wednesday morning the Presidents in Public Health, Military Medicine, Medico-Legal Medicine, and Pharmacology opened their sections with Addresses, and after these the work of all the sections was proceeded with. The following is the list of the principal officers of the Congress:—Presidents, Honorary Presidents—Surgeon-Major-General W. R. Rice, M.D., C.S.I., I.M.S.; Surgeon-Major-General A. F. Bradshaw, C.B., V.H.S., A.M.S. President of the Congress—Surgeon-Col. R. Harvey, M.D., F.R.C.P., D.S.O., V.H.S., I.M.S. Vice-Presidents of the Congress—Joggobundhu Bose, M.D.; Surjee Coomar Sarbadhicari, G.M.C.B. Medicine and Pathology—President: Surgeon-Lt.-Col. A. Crombie, M.D., I.M.S. (Bengal). Surgery, including Ophthalmology—President: Surgeon-Lt.-Col. E. Lawrie, M.B., M.R.C.S., I.M.S. (Hyderabad). Public Health—President: Surgeon-Major W.

G. King, M.B., C.M., D.P.H., I.M.S. (Madras). Military Medicine and Surgery—President: Surgeon-Colonel Gore, A.M.S. Obstetrics and Diseases of Women and Children—President: Surgeon-Major H. P. Dimmock, L.R.C.P., M.R.C.S., I.M.S. (Bombay). Medico-Legal Medicine and Insanity—President: Hon. W. R. Kynsey, C.M.G., F.R.C.P.I. (Ceylon). Pharmacology and Indigenous Drugs—Presidents: G. Watt, M.D., C.M., F.L.S., C.I.E.; Rai Kanai Lal Dey, Bahadur, G.M.C.B., C.I.E. Delegates to the Congress—Royal College of Physicians of Ireland: Brigade-Surgeon Charles Sibthorpe; Royal College of Surgeons, England: Dr. Durham; British Medical Association: Dr. Ernest Hart: Cambridge University: Professor Hankin; Aberdeen University: Professor Reid; Glasgow University: Brigade-Surgeon-Lt.-Col. A. H. Arnott; Madras Municipality: Dr. J. Nelld Cook; Ceylon Government: Dr. Kynsey, Dr. MacDonald, Dr. Garvin; French Government: Dr. Gallay. The *Lancet* was also represented. The following attracted the interested attention of the visitors:—Medical Institutions in Calcutta: The Medical College Hospital, the Ezra Hospital, the Eden Hospital, the General Hospital, the Military Station Hospital, the Campbell Hospital, Lady Dufferin Zenana Hospital, the Mayo Hospital, Out-door Dispensaries, Lunatic Asylum, the Leper Asylum. Many places of interest in and near Calcutta were visited, such as the Town Hall, the Indian Museum, Fort William, the High Court, the Treasury Buildings, the site of Black Hole of Calcutta (Post Office), the Bank of Bengal, the Metcalfe Hall, the Kidderpore Docks, the Zoological Gardens, the Botanical Gardens, Barrackpore Park, and the Hooghly Bridge.

### EARLY PARTURITION.

*La Presse Médicale* quotes from *Archiv. für Gynæk.* some conclusions relating to parturition under twenty, founded on P. Muller's experience at Berne, from 1872 to 1891. Of 6,126 women delivered, 493 were under twenty years of age. Narrowness of the pelvis in all dimensions, due to incomplete development of the bones, was more common; vertex and face presentations were more frequent, breech presentations more rare, than in other cases; the average duration of labour was longer, by two to three hours, than in older women; eclampsia, uterine inertia, necessity for the use of forceps, were not more common; craniotomy was more often necessary, on account of contracted pelvis; perineal rupture less frequent, as much on account of the necessity for operative enlargement of the vulvar orifice (as a preventive) as on account of the elasticity of the tissues; more girls than boys were born; the size of the children was smaller in proportion to the youth of the mothers; premature confinement was more common; the children were as viable as those of older mothers. The mortality was 1·01 per cent.

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**LACTOPHENIN** has been found *very efficient* in *Erysipelas, Fever, Erysipelas with violent Delirium, Croupoury Phenmonia, Phthsis florida* (see *Dr. A. Jaqust's* paper "On the effect of *Lactophenin*," in the "Correspondenzblatt fuer Schweizer Aerzte." Basel).

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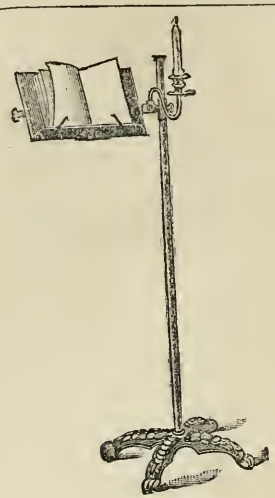

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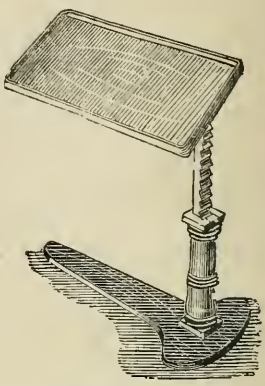

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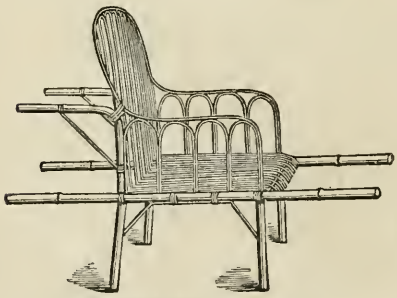

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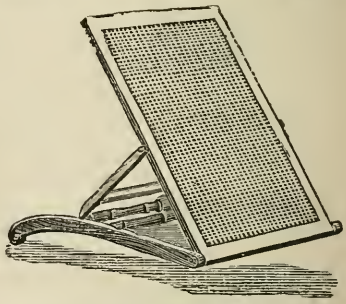

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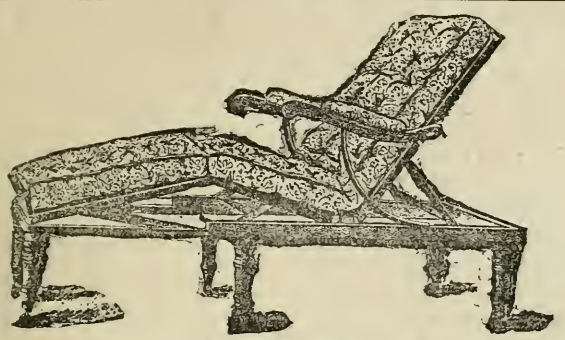

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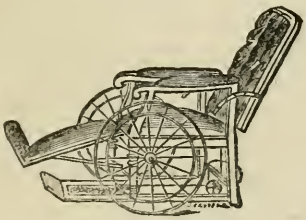

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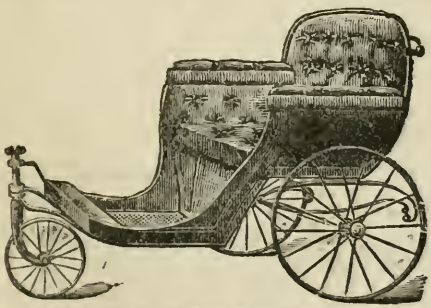

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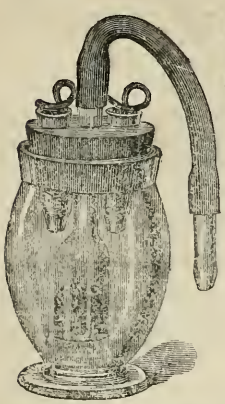

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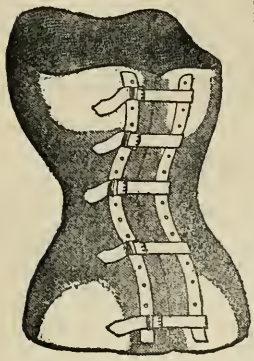

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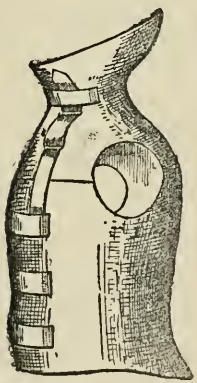
In severe angular cases circumference over apex of curve, position of same, and contour should be given; in lateral cases a description of the case.

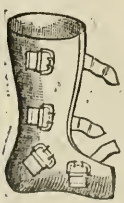
In all cases it should be stated if for male or female.



**CERVICAL JACKET.**

Same measurements required, and circumference at neck, and length from neck to axilla.

**Any part of the Jacket can in the process of Manufacture be left Soft.**



**CLUB FOOT.**

Circumference below knee.
„ ankle.
„ heel and instep.
Length from below knee to ground.
„ of foot.

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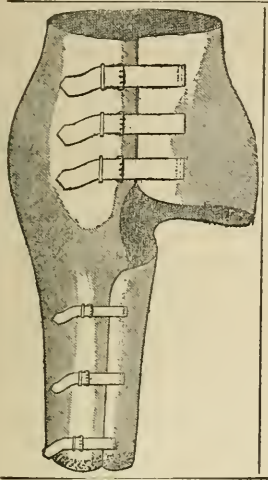
# Cocking's Adaptable Poroplastic Jackets and Splints.



## Instructions for Measurement, &c.

### HIP SPLINT.

Circumference at waist.
„ hips.
„ thigh, top of
„ above knee.
Length from waist to groin.

**State if for right or left side.**

### LEG SPLINT.

Circumference at top of thigh.
„ above knee.
„ at knee.
„ below knee.
„ calf.
„ ankle.
Length from groin to centre of knee.
„ centre of knee to ankle.

**State if for right or left leg.**

When the foot-part is required, also circumference of heel and instep, and length from centre of knee to ground.

If the limb is contracted the contour should be given.

*Splints are also made in Poroplastic for fracture of Inferior Maxilla, Humerus Elbow-Joint, Forearm, Thigh, Knee-Joint, Leg, Shoulder-Joint, Hand, &c.*

*These Splints can be fitted perfectly to the Patient if softened either by hot water or in a Heater made for the purpose. When mounted with webbing, hot water will do; if with leather, a Heater should be used. The material becomes quite hard again in two or three minutes.*

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2 to 4 grains

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*** *In prescribing either of the above preparations, it is suggested to insert in parentheses, as follows* (**BULLOCK**).

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Strengthens the Nervous System.

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The preparation is most palatable and has none of the astringency of ordinary iron preparations.

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